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June 2014 Foreword

by John Adamson

This September edition marks an important new point for the journal as it is my first as Chief Editor. Deep appreciation should firstly be extended to my predecessor, Roger Nunn, who has steered the journal through a decade of growth and has taken the leadership in creating a new community of academic practice in EFL in the Asian context. He moves on to our sister journal, *Asian ESP Journal*, with our best wishes.

Seven articles and two book reviews are presented in this edition, opening with Wang Yumin and Fiona Henderson's contribution examining the teaching of content with Moodle to help critical thinking in academic reading. Their study reveals that progress was achieved in critical thinking, as well as language proficiency. The second piece by Zuhana Mohd Zin and Wong Bee Eng also investigates critical thinking and reading, and uses the California Critical Thinking Disposition Inventory (CCTDI). Findings show a lack of some dispositional attitudes toward critical thinking were manifested in critical reading performance. Yi-Huey Guo's study looks at Taiwanese college freshmen's descriptive writing and explores the influence of previous education. Following this is a study by Jianzhong Luo and Nolan Weil which employs the Strategy Inventory for Language Learners (SILL) to investigate ESL students in a university Intensive English Program (IEP) in the United States. Their findings show an increase in frequency of strategy use over some proficiency levels with social and metacognitive strategies seen as prominent. Yan Zhao and Peter Brown's article examines the cognitive writing processes of three ESL creative writers through a sociocultural lens. The article by Kaoru Kobayashi and Andrea Little compares incidental and intentional vocabulary learning supplemented by meaning-focused input with word types as a parameter among Japanese bioscience majors. Finally, Hui-ju Liu's study explores language anxiety among university freshmen.

The two book reviews are by Eirene C. Katsarou on *The Strategy Factor in Successful Language Learning* (Multilingual Matters, 2013), and Kioumars Razavipour on the edited volume, *The Companion to Language Assessment* (John Wiley & Sons, Inc., 2013) by A. J. Kunnan (Ed.).

Thanks are extended to the authors, editors, reviewers, and those involved in production. We hope you will enjoy the edition and look forward to your contributions.

John Adamson
Chief Editor

Teaching Content Through Moodle to Facilitate Students' Critical Thinking in Academic Reading

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Wang Yumin is a Lecturer in the International Education College at Henan University, China. She has been teaching EFL reading and writing skills to undergraduate students in the Australia-China program for about ten years. She holds an M. A. in Linguistics and Applied Linguistics from Sichuan University, China. Her research interests focus on second language learning, innovative teaching strategies, and cross-cultural communication.

Fiona Henderson is a Senior Lecturer in Academic Language and Learning & Coordinator Student Learning Unit at Victoria University, Australia. She was a co-researcher on the nationally funded Academic Literacy project: *Investigating the efficacy of culturally specific academic literacy and academic honesty resources for Chinese students*. She leads an annual Teaching and Learning conference with Chinese partner institutions in China with whom she undertakes collaborative research projects. Her current focus is a national Academic Integrity project: *Working from the Centre supporting unit/course coordinators to implement academic integrity policies, resources and scholarship*.

Abstract

Critical thinking is essential in higher education and professionally. This project arose from concerns about a perceived lack of critical thinking development in Chinese students in a joint Australia-China Business diploma program taught in China in English. Using the Critical Thinking Disposition Inventory (Chinese Version) as an exploratory tool, the majority of the

joint program students scored between 280 and 350, indicating that they have both strengths and weaknesses in critical thinking. The core of the project was to integrate critical thinking into academic reading with the help of Virtual Learning instruments and develop structured teaching and learning activities in the English reading course to enable the Chinese students to learn to ask, analyze and evaluate their target materials and consequently build up their confidence to use these skills in daily learning and other fields. The study found that our content-based activities and online modules in academic reading have the potential to scaffold construction of an integrated development of students' subject knowledge, language skills, critical thinking and overall learning ability. By the end of this project, participants' perceptions of the reading course have changed; after a semester of reading and thinking activities, they no longer saw the reading course just as a means to learn grammar and accumulate vocabulary and knowledge. With the learning modules designed to promote students' capability of critical thinking as well as language proficiency in academic reading, students also realized the importance of asking questions, learned how to make inquiries, and search for answers.

Keywords: academic reading, critical thinking, transnational education, virtual learn

Transnational education (TNE) also known as “cross-border education”, “offshore education” and “borderless education” (Stella & Woodhouse, 2011, p. 3) exists in many forms for many reasons. In China, from a teaching and learning perspective it has broadened educational offerings and experiences. For the Chinese Ministry of Education it has been a method for providing professional development and for evaluating new teaching approaches (Chinese Ministry of Education, 2007, 2010; Gu, 2010; Wang, 2008). In this light, the learning objectives such as “the ability to think critically”, “the ability to evaluate” and “the ability to create new solutions” of many western universities were deemed as appropriate to build into the Chinese curriculum (Sun, 2011, p. 51).

Critical thinking and communication skills are key graduate capabilities of Australian universities, which means that all their graduates can be expected to graduate with these skills from having them explicitly developed within the curriculum (e.g., VU, 2012). However, from daily teaching and term paper writing at one Chinese university, Australian and Chinese teachers found that students could not provide sound reasons to support their opinions. Some students even dared not to express a clear position, afraid of doing something wrong. In the

reading course, feedback from students after the Diploma Entry Test (DET) and International English Language Testing System (IELTS) (Academic version) indicated that they had difficulties examining and evaluating relevant information when making choices and decisions in reading comprehension. Interviews with the first-year students in one joint Australia-China program suggested that they were confused and lost when faced with open-ended questions and they struggled to cope with this situation. These phenomena exposed students' lack of confidence, critical thinking habits and communication skills in their academic life.

After ten years' work with Chinese college students and more than 20 years learning experience in China, this research team speculated that one important reason which had led to students' lack of critical thinking lay in many decades of practice for China's exam-oriented education. Before joining the China-Australia program, in order to succeed in China's National College Entrance Exam (NCEE), many Chinese students tended to learn by rote, learn standard answers and acquire theoretical and often factual knowledge instead of thinking independently and creatively. Consequently, when learning, these students did not focus their thinking habits on higher level thinking such as asking meaning-centered questions. After succeeding in NCEE and entering the Australia-China program, students lacked the needed motivation to expand their learning skills because students believed they had overcome the most significant hurdle in the whole of their life. The current situation among students in the Australia-China program calls for immediate action to awaken students' awareness of critical thinking and activate it.

Literature review

Definitions of critical thinking

The word 'critical' has its root in the Greek words 'kriticos' and 'criterion'. 'Kriticos' means "of a nice judgment" and 'criterion' refers to "a judgment made of the Truth or Falsehood of a proposition" (Bailey, 1721, *crip-* to *crot-*). Therefore, critical thinking is a process for working on the ability of "discerning judgment" or developing insight and understanding. Critical thinking is a buzz phrase, meaning it is currently in vogue, especially in education. There exist multiple definitions for critical thinking. This may reflect its multifaceted nature. Some noteworthy opinions come from Dewey (1933), the Delphi report (American Philosophical Association, 1990), Ennis (1996) and Fisher (2001). Dewey (1933) identified it as "active, persistent, and careful consideration of any belief or supposed form of knowledge

in the light of the grounds that support it and the further conclusions to which it tends” (p. 118) and similarly Ennis (1985) took it to be “reasonable, reflective thinking that is focused on deciding what to believe or what to do” (p. 45). Explicitly including the idea that it is a skill, Fisher and Scriven (1997) argued that “critical thinking is the skilled and active interpretation and evaluation of observations and communications, information and argumentation” (p. 20).

In 1990, a Delphi-study¹ was conducted by the American Philosophy Association, in which a panel of 46 critical thinking experts across the disciplines of philosophy, education, social, and physical sciences, led by Peter A. Facione defined critical thinking. This definition is regarded by many as perhaps the most authoritative definition of critical thinking (Austhink², 2007). The Delphi group stated as follows:

The ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit (Facione, 1990, p. 2). The definition has two main dimensions: cognitive skills and affective dispositions. Cognitive skills of critical thinking refer to analysis, inferences, interpretation, explanation, self-regulation, evaluation, answering and asking questions; on the other side affective disposition of critical thinking refers to the truth seeking, open mindedness, analyticity, systematicity, self-confidence, inquisitiveness and maturity (Facione, 1990, pp. 4-11). Each definition is largely consistent with one another and all definitions of critical thinking involve skills of interpretation, analysis and evaluation.

Importance of critical thinking in higher education

Liu Rude (2000) gave a penetrating analysis on the status quo of Chinese students’ critical thinking ability. The situation had not apparently improved when the President of Harvard University, Richard Charles Levin (2010), pointed out that China’s higher education lacked

¹Delphi may be characterized as a method for structuring a group communication process so that the process is effective in allowing a group of individuals as a whole, to deal with a complex problem Linstone & Turoff (1975).

²Austhink, a trademark of the Dutch firm Critical Thinking Skills B.V. (CTS), is a leader in the development of software that helps people visualize and organize their thoughts. The forerunner of CTS, Austhink Software Pty Ltd., was founded in 2004 and was based in Melbourne, Australia. Today, based in Amsterdam, CTS/Austhink has partnerships in Australia, Asia, the United States and Europe.

two very important elements: multidisciplinary breadth and the cultivation of critical thinking. Potentially, a transnational educational program could address this lack, as in the case of the partnership in this study. In Australia, Victoria University's (VU) policy about Graduate Capabilities (Victoria University, 2012) stated that three aspects of VU's six graduate capacities are: to problem solve in a range of settings; locate, critically evaluate, manage and use written, numerical and electronic information; and communicate in a variety of context and modes. The significance of these capabilities fits with Fu Xiao's (2011) comment that the cultivation of critical thinking ability of students is placed at the core of curriculum development by many universities across the world. It has now become a goal in China's education program too (Sun, 2011, p. 51).

Acquiring critical thinking skills

Like reading and writing, critical thinking is a higher order thinking skill that has application in all areas of life and learning. Housen (2001) specified that critical thinking cannot be developed in a vacuum and needs subject matter as a medium for its exercise and development; at the same time, critical thinking transcends the subject matter in which it develops. While critical thinking takes root in one area, it has the potential to blossom in others. One could even argue that transfer is a predictable attribute of critical thinking. According to Housen, "critical thinking may not be critical thinking unless it shows signs of transfer" (2001, p. 101).

Jacobs and Farrell (2003) argued that the Communicative Language Teaching paradigm shift has led to eight major changes in approaches to language teaching. These eight changes are: learner autonomy, social nature of learning, curricular integration, focus on meaning, diversity, thinking skills, alternative assessment, and teachers as co-learners. Among the eight changes are thinking skills and language should serve as a means of developing the higher-order ones, namely critical and creative thinking. This level of thinking promotes the idea that "learning is not a collection of lower-order facts to be remembered and then regurgitated for exams, but that the aim of school learning is to apply our knowledge toward making a better world" (Jacobs & Farrell, 2003, pp. 5-30).

To develop critical and creative thinking, Littlewood (1981) gave a range of communicative activities including functional communication activities and social interaction activities. Ur (1996) suggested ways to teach reading by exemplifying various types of activities. Denis, Watland, Pirotte and Verday (2004) considered the roles and competencies of the e-tutor. When discussing the role of an e-tutor, their view is learner centered and based

on a socioconstructivist approach. This means that the learner is active in building his/her knowledge. The e-tutor is proactive; he/she intervenes to help the learners to manage the learning resources and their interactions with their tutor and their peers.

It has been a trendy feature for higher education institutes in mainland China to integrate IT technology and Internet techniques into classroom language teaching since the publishing of the College English Curriculum by China's National Education Ministry in 2007. The recent advancement of information communication technologies provides more channels to promote out-of-classroom contact between teachers and students. Warschauer (1997) pointed out that computer-mediated communication stands out from other communication media because of the following features: "(1) text-based and computer-mediated interaction, (2) many-to-many communication, (3) time- and place-independence, (4) long distance exchanges, and (5) hypermedia links" (p. 470). In China, as elsewhere, "Blackboard" and "WebCT" are two popular Virtual Learning Environments (VLEs) while Modular Object-Oriented Dynamic Learning Environment (Moodle), a course management system for online learning, is emerging as one of the fastest growing free open source VLE options to teachers without a computer background.

The stated philosophy of Moodle includes a constructivist and social constructionist approach to education, emphasizing that learners (and not just teachers) can contribute to the educational experience in many ways (Moodle, 2011). Moodle, designed to promote the social constructivism of learning, offers many useful tools such as forums, chats, blogs, and workshops so that teachers can apply different formats of social interaction and collaboration to their teaching. The goal of Moodle is to provide a set of tools that support an inquiry- and discovery-based approach to online learning. Furthermore, Stanford (2009) argued that it can create an environment that allows for collaborative interaction among students as a standalone or in addition to conventional classroom language teaching.

QQ is an abbreviation of Tencent QQ, which provides customers with a popular instant messaging software service. According to Alexa (a subsidiary company of Amazon.com which provides information about websites including Top Sites, Internet Traffic Stats and other information on 30 million websites) Internet rankings, the website QQ is ranked 9th, ahead of Twitter, the 10th most popular (Wikipedia, 2013). QQ also offers customers a variety of services, including online social games, online music, micro blogging, group chat, QQ voice, and QQ-zone (search for new friends). So far, QQ has been one of the most successful social networking companies in mainland China. Almost every college student has his/her QQ account. Dai Jianchun (2011) conducted a study on the construction and

application of a QQ-based interactive after-class translation teaching model which was highly successful with tertiary students. Li and Zhou (2012) discussed the feasibility of using QQ in traditional classroom teaching and explored problem-based collaborative learning activities via QQ groups. They concluded that using QQ significantly enhanced the efficiency and quality of collaborative learning.

With the social tools noted above and the possibility for enhanced social engagement after traditional face to face teaching, there may be opportunities for developing critical thinking in one Australia-China TNE program which involves English language and academic skills development in conjunction with the Diploma of Business, taught by teachers from both institutions. For language learning, the development of communicative skills requires social interaction between the teacher and the students and among the students themselves. Based on the Critical Thinking Disposition Inventory (Chinese version) survey and interviews with students in the Australia-China program taught at Henan University, this project employed the teaching expertise, academic resources and technologies shared by Victoria University and Henan University. The researchers devised a series of activities and conducted them through the Moodle and QQ online platforms to promote students' critical thinking as well as language learning in the subject of Academic Reading.

Critical thinking testing instruments

Since the 1980s, approximately 30 kinds of critical thinking testing instruments such as California Critical Thinking Disposition Inventory (CCTDI), Watson-Glaser Critical Thinking Appraisal (WGCTA), Cambridge Thinking Skills Assessment (CTSA) and Collegiate Assessment of Academic Proficiency Test (CAAP) have been developed (Zhu, 2009, p. 13). Watson-Glaser Critical Thinking Appraisal (WGCTA) measures cognitive skills. California Critical Thinking Disposition Inventory (CCTDI) measures the dispositional dimension of critical thinking. Cambridge Thinking Skills Assessment (CTSA) is an entrance test consisting of 50 problem solving and critical thinking questions.

The California Critical Thinking Disposition Inventory measures the “willing” dimension in the expression “willing and able” to think critically (Insight Assessment¹, 2011, para 2). This inventory comprises the following seven separate but complementary sub-scales:

¹ Insight Assessment, a division of California Academic Press, was founded by people who believe that success in any endeavor demands good thinking. For over 25 years Insight Assessment has been writing, testing and validating tests of human reasoning.

Truth seeking (T), Open-mindedness (O), Analyticity (A), Systematicity (S), Critical thinking Self-confidence (C), Inquisitiveness (I) and Maturity (M). The Truth Seeking scale seeks for alternatives or tendencies for evaluating different ideas. The Open-mindedness scale evaluates the tolerance of the individual to different approaches and the individual's sensitivity to his/her own mistakes. The Analyticity scale evaluates the care taken for potentially problematic issues and the ability to reason and use subjective evidence even for difficult problems. The Systematicity scale evaluates the information base and procedures for a decision making process rather than chaotic reasoning. The Self-confidence scale evaluates the level of trust of the individual to his/her own reasoning. The Inquisitiveness scale evaluates the individual's own training and tendency to learn without expecting any profit and the Maturity scale evaluates maturity of mind and information development.

Considering the joint program students' language ability, motivation and the objectivity of the outcome in critical thinking practice, this project adopted the Critical Thinking Disposition Inventory test (Chinese version) to build an overall and precise picture of the status quo of critical thinking for the joint program students. The project conducted a post-trial survey and interviews to evaluate students' learning outcomes after the delivery of this program.

Research objective and approach

Faced with the above situation, this research was committed to integrating critical thinking into academic reading with the help of Virtual Learning instruments. It aimed to create a series of teaching and learning activities in the English reading course to develop students' critical thinking while improving students' language proficiency. In this way, the research would help bridge the gap between VU's graduate capability expectation and the current critical thinking skills of newly recruited students in the VU-China program.

The purpose of this project was to answer the following questions: How do the Chinese students in our program appreciate critical thinking in their daily learning? How does this project take advantage of the Chinese and Australian teachers' areas of expertise and other academic resources to enhance the students' learning process? What kinds of activities can be employed to facilitate students' critical thinking in the reading course? How do students react toward this form of learning? Were students' critical thinking skills improved during the trial period when they took part in the reading and learning activities?

To tackle these questions, action research (Dahlberg & McCaig, 2010) using both quantitative and qualitative data collection techniques was adopted. The project was designed to be carried out in the following four steps.

First, the project team collected data on the status quo of the critical thinking of students in the joint Australia-China program. Before the commencement of the delivery, the project team interviewed first-year students in the joint program taught at Henan University. They then conducted peer observations and discussions among both VU teachers and Chinese English teachers. Finally, they analyzed students' term paper writing and final exam results.

Second, in order to get a comprehensive picture about students' disposition to think critically, the project conducted a literature review on the testing instruments of critical thinking. After comparing several commonly used instruments, the team adopted the Critical Thinking Disposition Inventory (Chinese Version), also known as CTDI-CV.

Third, in the light of the pre-trial interviews and the Critical Thinking Disposition Inventory (Chinese Version) survey, necessary and corresponding measures were taken to facilitate students' critical thinking and overall learning ability as well as language proficiency in the Australia-China Academic Reading program. Activity-based teaching is widespread in VU and relevant resources are abundant and readily available. In China, teachers often feel a lack of latest and first-hand academic resources. This project therefore took advantage of the Chinese and Australian teachers' areas of expertise and academic resources. The Chinese and Australian teachers worked together both by regular Internet meetings and by the opportunity of travel. They devised new activities for reading and learning materials and explored potential web platforms to deliver these activities and materials.

Fourth, this project adopted these activities and materials for the students involved in English reading courses. Students involved are known as the 2011 intake, based on Chinese system of labeling students by their commencement year. Henan University researchers instructed and encouraged students to keep up with the progression of the course. During the process, researchers made adjustments according to time constraints and student feedback.

At the end of this trial, the project conducted a post-trial survey and some small-group interviews to evaluate the efficiency of content-based activities on students' critical thinking.

Research process

Pre-trial survey on the status quo of critical thinking of students in VU-China program

The pre-trial survey attempted to identify students' various strengths and weaknesses in critical thinking. The data for this study was collected from students in the Australia-China program at Henan University.

Participants

To build a comprehensive picture about students' critical thinking in the Australia-China program, 396 students were randomly selected to take the Critical Thinking Disposition Inventory (Chinese Version) survey from the 30 teaching classes in the Australia-China program (about 34 students in each class; approximately 1000 students in total).

The demographic variables of the participants included age range, gender, major area of study and stage in course. The age range for the participants was from 17 to 22. There was equal participation of females and males in the research. Participants' majors included international trade, accounting and computer science. Participants' stage in course varied from first to third year. First year students comprised 40%, second year 28% and third year 32% of the 396 participants.

Instruments

The data gathering instrument was the Critical Thinking Disposition Inventory (Chinese Version) survey. It is calibrated for use with the general adult population including working professionals at all levels and students in grades 10 and above, including undergraduates, technical and professional school students, and graduate students. It was administered in class under the supervision of local teachers and the task was completed in 20 minutes.

The Critical Thinking Disposition Inventory (Chinese Version) (CTDI-CV) consists of seven sub-scales (10 statements under each sub-scale) and produces an overall CTDI total score. It measures seven attributes that influence an individual's capacity to learn and to effectively apply critical thinking skills. The CTDI-CV has 70 attitude-measuring items and uses a 6-point Likert scale with "strongly agree", "strongly disagree" format to establish a character profile of a person's overall disposition to think critically based on their responses. For instance, under the scale "Truth-seeking", one statement could be "In face of a controversial issue, it is never easy to decide between competing points of view". Below this statement are six options: 1) strongly agree; 2) agree; 3) agree just a little; 4) disagree just a

little; 5) disagree; 6) strongly disagree (see Appendix A). The 70 statements include both positive items (30 items) and negative items (40 items).

The recommended score for each scale is 40 and the suggested target score is 50. All scores range up to 60. Scores below 40 on a given scale are considered by the instrument developers to be an indication of weakness in that critical thinking dispositional aspect; persons who score above 50 on a scale are strong in that dispositional aspect (Facione, Facione & Giancario, 2000). The total overall critical thinking disposition score is 420. A score of less than 280 shows serious overall deficiency in the disposition toward critical thinking (Facione, Facione & Giancario, 2000). An overall score of 350 or more is a solid indication of across-the-board strength in the disposition toward critical thinking.

The reliability of California Critical Thinking Disposition Inventory (CCTDI) has been measured using Cronbach's alpha in different populations. The alpha value of CCTDI in a study with adults including college students was 0.91, with alpha values of the seven sub-scales ranging between 0.72 and 0.80 (Facione & Facione, 1992). In studies with nursing students in Hong Kong, the alpha value of CCTDI was 0.85, with alpha values of the seven sub-scales ranging between 0.34 and 0.76, which shows a poor internal consistency. The alpha value of Critical Thinking Disposition Inventory (Chinese Version) was 0.90, with alpha values of the seven sub-scales ranging between 0.54 and 0.77 (Peng et al., 2004). Cronbach's alpha value for the present study was 0.81, with alpha values of the seven sub-scales ranging between 0.77 and 0.80, demonstrating strong internal consistency and reliability. The grounding of the CCTDI in the previously mentioned Delphi study (American Philosophical Association, 1990) supports its validity. Furthermore, by factor analysis, the Kaiser-Meyer-Olkin value of the present study is 0.81, which indicates strong correlation patterns. Finally, for these data, Bartlett's test is highly significant ($p < 0.001$), and therefore factor analysis is appropriate (Field, 2005).

The software program SPSS V13.0 was used to examine students' critical thinking disposition and their willingness to participate in the critical activities. SPSS is short for Statistical Package for the Social Sciences, later shortened for Statistical Product and Service Solutions (Yu, 2007). It is a user-friendly statistical software with many help and tutor pages. This research is based primarily on version 13 of SPSS.

Results and discussion

According to the collected data, the mean value of participants' overall critical thinking disposition score was 300, with the lowest score being 207 and the highest 382. Twenty-six percent of the participants scored below 280, characterizing them as deficient in the critical thinking disposition. Only 7% of participants scored 350 or higher, indicating a high disposition for critical thinking. The majority of students (67% of the participants) scored between 280 and 350, which indicated that they have both strengths and weaknesses in critical thinking.

Table 1 shows all participants' critical thinking in seven sub-scales. The mean for each sub-scale score is above the cut-off score of 40, which means it is possible for participants to develop as qualified critical thinkers across all the seven sub-dimensions. As the suggested target score is 50, and the average score of all the seven sub-scales is far lower than the target score, a big gap is indicated between the status quo and the expectation. Especially for the sub-scales of Systematicity, Self-confidence, and Truth-seeking, participants' average score is only a little above the cut-off score. Participants are comparatively better at Inquisitiveness, Open-mindedness, and Maturity.

Table 1: Participants' results in the sub-scales

		T	O	A	S	C	I	M
N	Valid	396	396	396	396	396	396	396
	Missing	0	0	0	0	0	0	0
	Mean	41.27	44.83	44.19	40.21	40.33	45.16	44.72
	Median	42.00	45.00	44.00	40.00	40.00	46.00	45.00
	Std. Deviation	6.624	6.060	6.225	6.588	7.040	7.297	6.895
	Minimum	21	25	22	21	22	21	18
	Maximum	56	60	60	59	60	60	60

(Note: 'T' is short for Truth-seeking, 'O' for Open-mindedness, 'A' for Analyticity, 'S' for Systematicity, 'C' for Self-confidence, 'I' for Inquisitiveness and 'M' for Maturity.)

Table 2 tells percentages of all the participants' sub-scale scores in four bands. In the band above 50, Inquisitiveness percentage (30.8%) is highest among the seven sub-scales; Maturity comes second which is 26.5%. Systematicity has the lowest percentage in the band above 50, which is 8.1%. In other words, more than one quarter of the students in the VU-HU program are relatively strong at Inquisitiveness while only less than one tenth of the students are good

at Systematicity. In the band between 30~39, Systematicity has the highest percentage (41.7%) among the seven sub-scales, and Self-confidence comes next (41.4%). In other words, about half of the students scored below the cut score of 40 in the sub-scales of Systematicity and Self-confidence. This reveals that half of the students are weak at Systematicity and Self-confidence.

Table 2. Participants' results as percentage bands

Scores	T	O	A	S	C	I	M
under 30 (%)	5.6	2.5	1.3	4.5	5.6	2.3	2.3
between 30 and 39 (%)	28.5	14.2	19.7	41.7	41.4	19.4	18.7
between 40 and 49 (%)	55.6	61.1	57	45.7	42.6	47.5	52.5
between 50 and 60 (%)	9.3	22.2	22	8.1	10.4	30.8	26.5
Total (%)	100	100	100	100	100	100	100

E-tools for critical thinking in academic reading

The majority of students (67% of the participants) scored between 280 and 350, which indicated that they have both strengths and weaknesses in critical thinking. Participants are comparatively better at Inquisitiveness, Open-mindedness, and Maturity while weaker at Systematicity, Self-confidence, and Truth-seeking. While on one hand, students are willing to learn, want to know how things work and are tolerant of divergent views; on the other hand, they are not organized, orderly, focused and diligent when approaching specific inquiry-related issues, questions or problems. Consequently, these students do not trust their own reasoning processes, and they lack confidence in asking questions and pursuing inquiries.

The objective of designing face-to-face or online course activities and relevant materials was to enable students to learn to ask, learn to analyze and evaluate their topic or information and consequently build up their confidence to use these skills in daily learning and other fields. Figure 1 below shows how asking and answering questions help to fulfill the three key connected skills of description, analysis and evaluation.

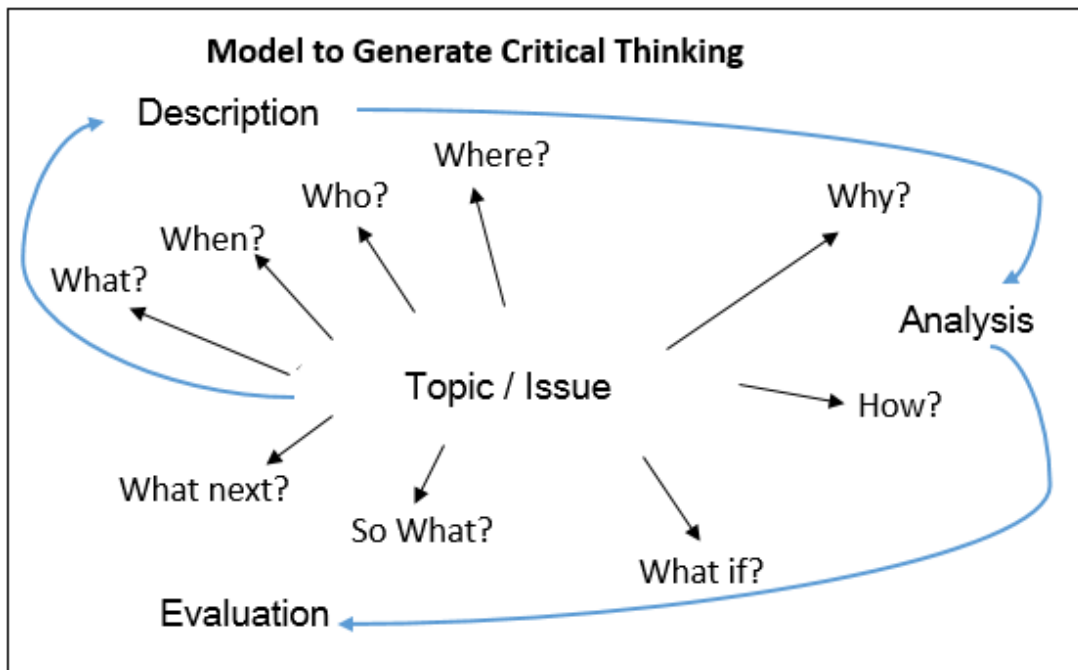


Figure 1. Critical Thinking Model (Hilsdon, 2010)

(Note: The figure has been reproduced with permission from John Hilsdon.)

Beginning with “what”, this systematic questioning can encourage students to consider every aspect of their topic or question. “What” identifies the issue; “why” explores it in depth, addressing causes and using theory; “how” helps you look at the processes at work; and “so what” helps you make judgments or conclusions, showing that you have reflected on implications. Students are encouraged to address most but not necessarily all of these questions for their topics or subtopics.

Based on the model to generate critical thinking, the researchers agreed the following main criteria to devise teaching and learning activities and materials: (a) authenticity and genuineness of materials (b) correlation to the issues in the reading course and its suitability to critical pedagogy (c) students’ language level and motivation. In consideration of the status quo of critical thinking of students in VU-China program, the researchers adopted the “rule of three” during the delivery of the project module: encouraging students to see an issue from at least three perspectives, offer at least three solutions to a problem, evaluate at least three different opinions, and find at least three examples to understand a concept.

After compiling materials, researchers began the basic installation of Moodle with technical support and major functions and paths of Moodle introduced to students. During delivery of the course, using QQ social network facilitated students’ online learning. Figure 2

is the main page of Moodle site for this program. It displays the features of Moodle 2.2.2 in both English and Chinese languages.



Figure 2. Learning in Moodle 2.2.2

Figure 3 shows some learning materials and activities in QQ 2012 edition.

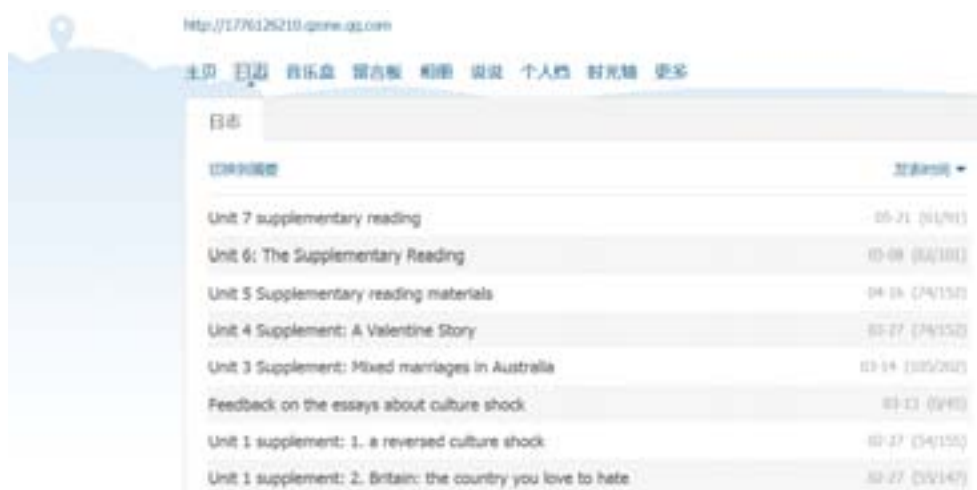


Figure 3. Learning in QQ2012

Learning outcomes

Students' routine textbook for the reading course in the Australia-Chinese program is *New Horizon College English*. It is a series of reading and writing lessons developed by Zheng Shutang and others particularly for use by non-English major students in China's many higher education institutions. It was firstly published in 2003 by the Foreign Language Teaching and

Research Press with a second version published in 2008. One topic in *New Horizon College English* is about college success. In addition to the textbook, researchers offered students in this study an online E-book, a series of videos, and some university mottos about college success and encouraged them to share their ideas before and after regular classroom learning while discussing relevant questions in class.

In the Moodle discussion forum, to help students better understand the concept “college success”, teachers designed a question and assigned tasks to students before progressing to the textbook: “After reading through the online book, have you got your own understanding of college success? Please describe what college success is. You can borrow ideas from the online book.” Figure 4 displays some participants’ ideas concerning this task.

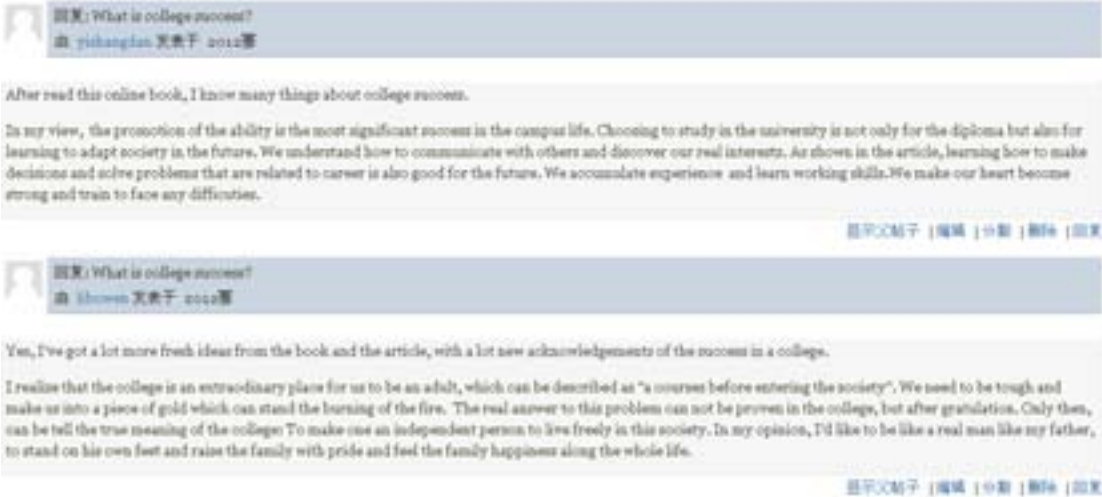


Figure 4. Participants’ Responses to College Success in Moodle

While learning the text in *New Horizon College English*, we asked students to think further and discuss what they can do to succeed in college after viewing a series of videos about academic success. Figure 5 displays some students’ participation in this activity.

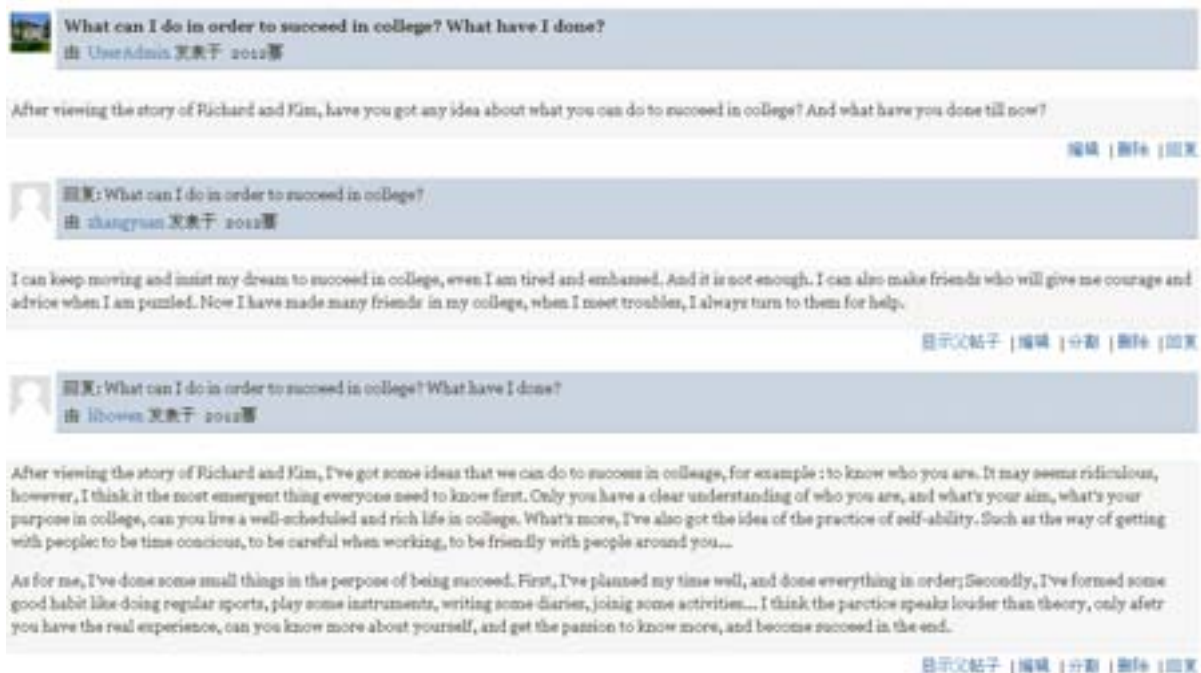


Figure 5. Participants' Responses to the Videos on Critical Thinking in Moodle

After learning the text on the topic of college success, students were invited to reflect on what they had learnt, develop their own life motto with some inspirations provided to them in Moodle and share them among their peers online. Figure 6 displays some features of the motto activity.

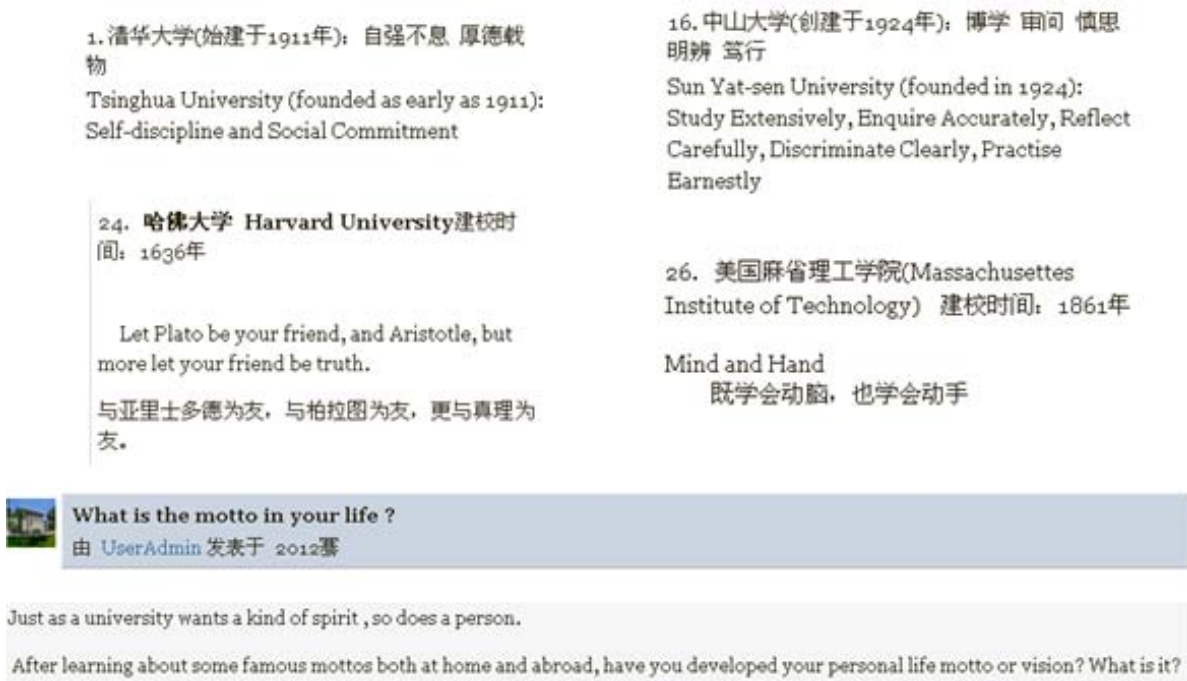
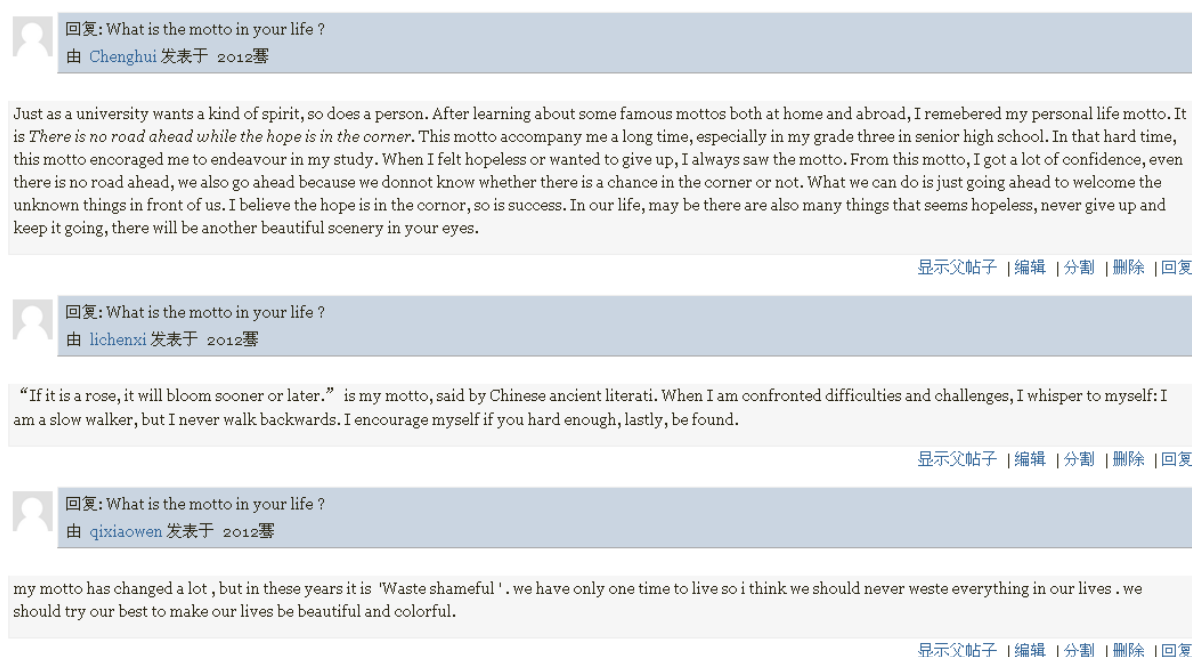


Figure 6. Activity of Our Motto in Moodle

Figure 7 shows some participants' reflections on their motto in Moodle.



The screenshot displays three forum posts in a Moodle interface. Each post has a header with a profile icon, the text '回复: What is the motto in your life?', and the author's name and date. The first post is by 'Chenghui' (2012) and discusses a motto about hope and perseverance. The second post is by 'lichenxi' (2012) and quotes a Chinese proverb about roses. The third post is by 'qixiaowen' (2012) and discusses the motto 'Waste shameful' and the importance of living fully. Each post includes a footer with navigation links: '显示父帖子 | 编辑 | 分割 | 删除 | 回复'.

回复: What is the motto in your life ?
由 Chenghui 发表于 2012

Just as a university wants a kind of spirit, so does a person. After learning about some famous mottos both at home and abroad, I remebered my personal life motto. It is *There is no road ahead while the hope is in the corner*. This motto accompany me a long time, especially in my grade three in senior high school. In that hard time, this motto encouraged me to endeavour in my study. When I felt hopeless or wanted to give up, I always saw the motto. From this motto, I got a lot of confidence, even there is no road ahead, we also go ahead because we donnot know whether there is a chance in the corner or not. What we can do is just going ahead to welcome the unknown things in front of us. I believe the hope is in the cornor, so is success. In our life, may be there are also many things that seems hopeless, never give up and keep it going, there will be another beautiful scenery in your eyes.

显示父帖子 | 编辑 | 分割 | 删除 | 回复

回复: What is the motto in your life ?
由 lichenxi 发表于 2012

“If it is a rose, it will bloom sooner or later.” is my motto, said by Chinese ancient literati. When I am confronted difficulties and challenges, I whisper to myself: I am a slow walker, but I never walk backwards. I encourage myself if you hard enough, lastly, be found.

显示父帖子 | 编辑 | 分割 | 删除 | 回复

回复: What is the motto in your life ?
由 qixiaowen 发表于 2012

my motto has changed a lot , but in these years it is "Waste shameful" . we have only one time to live so i think we should never weste everything in our lives . we should try our best to make our lives be beautiful and colorful.

显示父帖子 | 编辑 | 分割 | 删除 | 回复

Figure 7. Participants' Reflections on their Motto in Moodle

Another topic was about cultural differences. The article about cultural differences in the students' textbook described four essential stages of adjustment occurring when coming into a new culture. Researchers prepared two supplementary reading materials which explored this topic from two different perspectives. One supplement was titled “Britain: The country you love to hate”, in which a Chinese citizen explored the culture shock experienced in Britain. The other article introduced a reversed culture shock: a Chinese immigrant's revisiting experience in China after many years living in Canada. In addition students were pushed to further understand the theme with “The Rule of Threes” instruction. Hunter states “the kinds of questions we have learned to ask can helpfully be categorized into three kinds: questions about meaning; questions about truth; and questions about value” (2009, p.228). An important skill in thinking critically is being able to construct alternatives and to identify contrasting concepts. It is a useful rule to try to find at least three alternatives or contrasting concepts. Often, finding the first two will be relatively easy—it is finding the next one or two that proves enlightening. Figure 8 exhibits participants' extension activity on cultural differences in QQ2012.



Figure 8. Participants' Extension Activity on Cultural Differences in QQ2012

While participating in and reflecting on Cultural Differences in QQ, instructors in the project answered some unresolved questions, summarized students' overall learning situations, and shared some interesting and thought-provoking questions online in the QQ space for students' reference. Students tended to focus on content-based questions when their perception of the topic was widened, which could be shown from the following student questions:

1. People know clearly that they will face culture shock in the first place; why do many people still desire to go abroad?
2. Since many shops in UK close early during the day, why did Britain still become an economic giant?
3. Why are so many coins produced and in circulation in UK despite their inconvenience?
4. Why would the author experience a strong reversed culture shock, that is to say, he can no longer bear the things that go in a "normal" Chinese way, for instance, the traffic chaos, little sense of respect for privacy, or no concern for public interests?
5. What's the second author's real intention to release his journal full of seemingly bitter complaints about some annoying phenomena in China that many people (including some of us) take for granted?

Critical thinking in writing tasks

Considering the importance of critical thinking in writing, researchers designed two writing tasks which enabled students to display their critical thinking: task one was a film review and task two was an article summary, which expected students to summarize two different parenting styles and justify their own stand point.

The first writing task, a film review, was given to students at the beginning of the module delivery. The movie *The Guasha Treatment* was chosen based on researchers' teaching experience and the correlation between the film and the learning content in the reading course (*New Horizon College English Book 2*).

The researchers evaluated students' writing mainly from three aspects (Chen, 2008):(a) Thoughts: whether student clearly identifies important features of the argument or issue and analyzes them insightfully; (b) Organization: whether student organizes thoughts logically, develops ideas cogently, and connects them with clear transitions; (c) English expression skills: whether student effectively supports the main points of the critiques, demonstrates control of language, including diction and syntactic variety, demonstrates facility with the conventions of standard written English.

Learning Outcomes

Released in 2001, *The Guasha Treatment* tells a story about cultural conflicts experienced by a Chinese immigrant family in the USA. The first unit in *New Horizon College English Book 2* is about cultural differences. Therefore, at the very beginning of delivering this course, students were told to watch this movie and learn about cultural differences, share their opinions and feelings online and at the end of this course, they were expected to write a film review. Enough time was given so that students could watch the movie anytime they liked and return to catch more details and have further understanding about the movie.

The following italicized expressions are extracts from students' writing task in the film review.

(1) Some students identified the cultural differences as:

“Parenting styles (*beating children is a useful method to educate them while Americans think beating children is abusing them*), attitudes toward traditional Chinese medical treatment, the legal procedure, etc.”

(2) Some students not only found the problem, but also took the initiative to give solutions (quoted from some students' film review):

“Only finding the problem is far from sufficient, we have to get moving to give solutions to the problem and bridge the gap between various cultures: hold parties/meetings, shows, books, videos/programs, etc.”

“While in Rome, do as Romans do. On the other hand, we should not abandon our own culture; keep on GuaSha and communication.”

“We need to communicate more with people abroad, and advertise the validity of our way of dealing with people. Only in this way, can we get more communication and understanding of each other and get the right in our position in the world and gain reputation around the world.”

(3) Some students described their most impressive scene:

“Datong hopes to see his son on Christmas Eve, he has to pretend as a Santa Claus and climb a 9-storey high pipe. I think the pipe is not only a pipe, but also a gap, a deep gap between American and 5000-year Chinese culture. He wants to climb over the gap and his will never succeed. Perhaps no Chinese people really could succeed.”

(4) Concerning this point, still others gave different opinion:

“Datong is the name of the leading man. Also, Da Tong [大同] is a classical Chinese term. It refers to a utopian vision of the world in which everyone is at peace. Maybe someday there will be a Datong world.”

Post-trial questionnaire

To evaluate the impact of content-based activities on students' critical thinking, the research team conducted a post-trial survey. The researchers devised a list of post-trial questions specially customized for this project (See Appendix B) focusing on students' self-reflection of their learning process and their motivation in participation in this project. The research questions in the post-trial survey included multiple choice questions and open-ended questions. Considering participants' English language proficiency, the post-trial survey was delivered in Chinese so that students may feel free to express themselves. There were 177 participants in the post-trial survey.

According to the post-trial survey, 80% of the participants agreed or strongly agreed that their critical thinking ability improved through the learning activities. About 94% of the participants agreed or strongly agreed that they became more active in thinking, questioning and making their own decisions through the learning activities. More than 90% of the

participants agreed or strongly agreed that they had a wider and deeper perspective on the world and became more willing to accept new things through the learning activities. Reflecting on participation and performance all through the learning process, 35% were able to keep consistent internal motivation; 39% were motivated if they were pushed and 26% lacked motivation and self-discipline. More than 80% of the participants expressed the wish to take such a course again.

At the same time, 20% of the participants felt their critical thinking ability was not improved through the learning activities. Ten percent of the participants said that they would not want to take such a course again.

To further learn about the effect of this delivery and students' attitude toward this project, the researchers designed some subsequent open-ended questions, such as: (a) *Why do you want to continue?* (b) *Why don't you want to continue?*

To question (a) some typical responses were:

Participant 1: *Through these learning activities, I become more active in learning. They also encouraged me to cultivate the habit of self-discipline. It would be beneficial for my further study and other subjects' learning.*

Participant 2: *I learn to think independently and see the world and problems from various perspectives; I learn to use English to express my inner heart, thus improving my oral English.*

Participant 3: *I can better learn about the purpose, theme and main thoughts of an article, and have a deeper understanding about our textbook materials.*

Participant 4: *During the learning process, I learn to develop my own thinking and opinions. I become more skillful and focused in reading test; I can easily locate the answer.*

Participant 5: *From the comparative learning activities, I learn many techniques on analyzing discourse structure and content, and writing as well.*

Participant 6: *Such activities improve my interest in English reading. It offers diverse forms of learning English, not just limited to boring textbooks.*

Participant 7: *Group discussion is conducive to our all-round development; we become more respectful to other people's opinion and I become more open-minded.*

Participant 8: *Team work enables me to explore and discover through cooperation; team members think together and exchange ideas, which widen our horizon and extend our thinking. I also see my strength and weakness through team work and we can learn from each other and make progress together.*

To question (b), 'Why don't you want to continue?', the typical responses are as follows:

Participant 9: *I prefer the class which keeps teaching grammar; I enjoy teachers' lecturing for most of the time in class.*

Participant 10: *I like leisure reading, which is easier to take in and understand. (academic reading racks my brain[费脑] and its content is profound/sophisticated).*

Participant 11: *I like the learning which is tangible. Just like the paper, we can see it, touch it and feel it [有纸感, 有手感]; and thus we can really remember these knowledge.*

Students' feedback above indicated that after more than three months' participation in the project, most participants were more aware of critical thinking in the process of learning and some even intended to apply what they got from the reading course into other subjects' learning and further study. Some participants did not enjoy the online learning and lacked self-discipline and internal motivation.

Conclusion

Critical thinking is a skill needed throughout life. This project arose from concerns about a perceived lack of critical thinking development in students in the Australia-China program. The goal of the project and development has been to offer students rich opportunities to become effective critical readers and thinkers through a series of content-based activities and to widen and deepen students' discourse comprehension at the same time by providing multiple perspectives and a contextualized environment online through both Moodle and QQ and in regular classroom learning.

During delivery of this activity-based learning module, models of effective reading and critical thinking activities have inspired students' long lasting passion in subjects beyond textbook knowledge and strengthened students' reading ability. Students have gained some insights through comparing new ideas with their original knowledge. They have become more confident language users in real contexts, both studying alone and discussing together in a cooperative learning group. Moreover, they also tended to be better prepared for classes and have internalized the habit of reflecting on learning afterwards.

Complementary to regular classroom learning, Moodle and QQ are powerful teaching aids to conventional classroom instruction and effective supporting companions for blended course formats. Internet-based discussion forum in Moodle and QQ have facilitated students' learning, without dominating the classroom. Some reserved students speak up more frequently through online discussions. Moodle and QQ tracked learners' progress all the way, enabling students to check their immediate progress. As the most popular social network in

China, QQ has a high logging frequency and almost all students log in to their QQ account at least once daily. Once logged on, they often stay, which increased students' exposure to the learning activities and the interaction among them concerning the materials in QQ. As an extension of traditional classroom teaching, if adopted systemically for online learning, QQ could have a great advantage in providing more diverse learning resources and activities, sustaining students' motivation and ensuring higher participation.

The study finds that our content-based activities and online modules in academic reading have the potential to scaffold construction of an integrated development of students' subject knowledge, language skills, critical thinking and overall learning ability. The study demonstrates that students' perception of the Academic Reading subject is changed: they no longer just see the reading course as a means to learn grammar and accumulate vocabulary and knowledge. With the delivery of learning modules designed to promote students' capability of critical thinking as well as language proficiency in academic reading, students not only learn grammar and vocabulary, but also realize the importance of asking questions and learn how to make inquiries and search for answers. Moreover, the implementation of critical thinking instruction modules shows that students' capability of thinking about what they read in a critical way is enhanced to different degrees. One noteworthy point is that although the Moodle site for this program has both English and Chinese versions installed, almost all participants chose the Chinese version of Moodle to join in the activities, which may indicate that students in the program tend to think about the content when reading Chinese while being accustomed to get the literal meaning when reading English.

Limitations and recommendations

After setting up a Moodle site, because of the unstable Internet service on campus and students' variety of access to other computer networks, it took longer than desirable for students to log onto Moodle. As an alternative to Moodle, QQ was adopted into the delivery of some activities, which later proved to have higher participation and Click-through Rate.

During delivery of this project, some students had to be constantly pushed to join in the online learning activities, especially to join in the Moodle environment. If the instructors pushed harder, students might have been more attentive. After delivery of this program, without teachers' instruction, few students revisited the learning site and checked on what they had done. In addition, in the online discussion forum, many students made their contributions without spontaneously responding critically to the contributions of others. Only a few students responded to their peers' comment online. These facts indicate that either the

program did not foster ongoing motivation or students lack continuous inner motivation to participate in learning activities online, or both. It is important to design a long-term project to facilitate students' continual improvement in critical thinking.

Further research

As a course management and delivery system, Moodle has great potential to create a successful e-learning experience by providing a wide range of excellent tools that can be used to enhance conventional classroom instruction in hybrid courses or distance learning arrangements. QQ, as a very powerful social network, if used properly, could be an efficient tool for learning. When logging onto QQ and taking part in various learning activities, many students however are likely to be distracted from what they are doing. How to engage students in QQ learning more efficiently without their being distracted by the many other functions of QQ needs further exploration.

Unless pushed or urged by instructors, more than half the students gave little effort to apply what they had acquired through this project to other aspects of their life and learning; much less do they conduct similar learning activities constantly and voluntarily. For a large number of students, their habit of critical thinking is somewhat in a dormant state. How to inspire and sustain students' motivation to develop critical thinking habits needs further research.

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References

- American Philosophical Association. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction*. Millbrae, CA: California Academic Press.
- Austhink. (2007). Critical Thinking on the Web, Definitions of “Critical Thinking”. Retrieved June 20, 2012 from <http://austhink.com/critical/pages/definitions.html>
- Bailey, N. (1721). *A universal etymological English dictionary*. London: Smith, Elder & Co.
- Chen, X. D. (2008). *GMAT—ARGUMENT*. Beijing: Qunyan Press.
- Chinese Ministry of Education. (2007). College English curriculum requirements. Retrieved June 12, 2014 from http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/s3857/201011/xxgk_110825.html
- Chinese Ministry of Education. (2010). The national guidelines for medium- and long-term educational reform and development (2010-2020). Retrieved May 8, 2011 from http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe_177/201008/93785.html
- Dahlberg, L. & McCaig, C. (2010). *Practical research and evaluation. A start-to-finish Guide for practitioners*. Los Angeles: Sage.
- Dai, J. C. (2011). Study on the construction and application of QQ-based interactive after-class translation teaching model. *Computer-Assisted Foreign Language Education*, 138(3), 61-66.
- Denis, B., Watland, P., Pirotte, S. & Verday, N. (2004). Roles and competencies of the e-Tutor. *Proceedings of Networked Learning Conference 2004*. Retrieved February 25, 2012 from http://www.networkedlearningconference.org.uk/past/nlc2004/proceedings/symposia/symposium6/denis_et_al.htm
- Department of Higher Education, Ministry of Education. (2007). *College English Curriculum Requirements*. Shanghai: Shanghai Foreign Language Education Press.
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston: D. C. Heath.
- Ennis, R. H. (1985). A logical basis for measuring critical thinking skills. *Educational Leadership*, 43(2), 44-48.
- Ennis, R. H. (1996). *Critical thinking*. Upper Saddle River, NJ: Prentice-Hall.
- Facione, P. A. (1990). Executive summary of the Delphi Report. Retrieved June 12, 2014 from

- <http://www.insightassessment.com/CT-Resources/Expert-Consensus-on-Critical-Thinking/Delphi-Consensus-Report-Executive-Summary-PDF>
- Facione, P. A. & Facione, N. C. (1992). *The California Critical Thinking Disposition Inventory (CCTDI). Test Administration Manual*. Millbrae, CA: California Academic Press.
- Facione, P. A. & Facione, N. C., Giancarlo C. A. F. (2000). *The California Critical Thinking Disposition Inventory, CCTDI Scoring Supplement*. Millbrae, CA: California Academic Press.
- Field, A. P. (2005). *Discovering Statistics Using SPSS (2nd edition)*. London: Sage.
- Fisher, A. (2001). *Critical Thinking: An Introduction*. Cambridge: Cambridge University Press.
- Fisher, A. & Scriven, M. (1997). *Critical Thinking: Its Definition and Assessment*. University of East Anglia: Centre for Research in Critical Thinking.
- Fu, X. (2011). The cultivation of critical thinking and multidisciplinary viewpoint. *The Guide of Science & Education*, 3(8), 9-10.
- Gu, M. Y. (2010). A blueprint for educational development in China: a review of “the National Guidelines for medium- and Long-Term Educational Reform and Development (2010-2020)”, *Frontiers of Education in China*, 5(3), 291—309.
- Hilsdon, J. (2010). *Learning Development study guides*. Plymouth University. Retrieved January 20, 2012 from <http://www.learningdevelopment.plymouth.ac.uk/>
- Housen, A. C. (2001). Esthetic thought, critical thinking and transfer. *Arts and Learning Research Journal*, 18(1), 99-131.
- Hunter, D. A. (2009). *A Practical Guide to Critical Thinking: Deciding What to Do and Believe*. Hoboken NJ: John Wiley & Sons, Inc.
- Insight Assessment. (2011). *California Critical Thinking Disposition Inventory (CCTDI)*. Retrieved November 10, 2011 from <http://www.insightassessment.com/Products/Critical-Thinking-Attributes-Tests/California-Critical-Thinking-Disposition-Inventory-CCTDI>
- Jacobs, G. M. & Farrell, T. S. C. (2003). Understanding and implementing the CLT paradigm. *RELC Journal*, 34(5), 5-30.
- Levin, R. C. (2010). The arise of Asia’s Universities. *Tsinghua Journal of Education*, 31(2), 1-7.
- Li, L. Y. & Zhou, D. (2012). Preliminary of problem-based collaborative learning mode under Network QQ Group. *Software Guide*, 11(11), 170—172.

- Linstone, H. A. & Turoff M. (1975). *The Delphi Method: Techniques and Applications*. MA: Addison-Wesley.
- Littlewood, W. (1981). *Communicative Language Teaching: An Introduction*. Cambridge: Cambridge University Press.
- Liu, R. (2000). The significance of critical thinking and its connotation. *Teacher Education Research*, 12(1), 56-61.
- Moodle. (2011). Philosophy of Moodle. Retrieved August 30, 2011 from <http://docs.moodle.org/24/en/Philosophy>
- Peng, M. C. et al. (2004). Validity and reliability of the Chinese critical thinking disposition inventory. *Chinese Journal of Nursing*, 39(9), 644-647.
- Stanford, J. (2009). *Moodle 1.9 for Second Language Teaching*. Birmingham: Packet Publishing Ltd.
- Stella, A. & Woodhouse, D. (2011). Evolving dimensions of transnational education. In A. Stella & S. Bhushan (Eds.), *Quality Assurance of Transnational Higher Education: The Experiences of Australia and India* (pp. 3-17). New Delhi: National University of Educational Planning and Administration.
- Sun, Y. Z. (2011). Toward a critical thinking-oriented curriculum for English majors. *Foreign Languages in China*, 8(3), 49-58.
- Ur, P. (1996). *A Course in Language Teaching: Practice and Theory*. Cambridge: Cambridge University Press.
- Victoria University (VU). (2012). Graduate capabilities. Retrieved January 12, 2012 from http://tls.vu.edu.au/portal/site/design/graduate_capabilities.aspx
- Wang, S. R. (2008). On the revision of “College English Curriculum Requirements”. *Foreign Languages in China*, 5(1), 4-10.
- Warschauer, M. (1997). Computer-mediated collaborative learning: Theory and practice. *The Modern Language Journal, Special Issue: Interaction, Collaboration, and Cooperation: Learning Languages and Preparing Language Teachers*, 81(4), 470-481.
- Wikipedia. (2013). List of most popular websites. Retrieved May 2, 2013 from http://en.wikipedia.org/wiki/List_of_most_popular_websites
- Yu, C. H. (2007). *SPSS and Statistics*. Beijing: Publishing House of Electronics Industry.
- Zheng, S. T. (2008). *New Horizon College English*. Beijing: Foreign Language Teaching and Research Press.

Zhu, X. S. (2009). *English Majors' Critical Thinking Features Seen from Argumentative Essays*. Beijing: Guangming Daily Press.

Appendix A. Critical Thinking Disposition Inventory (Chinese Version) Survey
(Peng, Wang, Chen, Bai, Li, et al., 2004) as presented to students in the current study.

Note: The present project's use of the inventory is with permission from Peng Meici. The items of this inventory are developed based on focus group interviews of nursing students in China, Taiwan, Macao and Hong Kong. It is not a translated version of California Critical Thinking Disposition Inventory.

批判性思维能力性格测试

年级：_____ 专业：_____ 性别：_____ 姓名：_____

各位同学:

本问卷的主要目的是了解中外合作办学学生的批判性思维倾向与能力情况。并在此基础上对中外合作办学学生批判性思维的现状和教育问题进行研究。感谢您抽出宝贵时间填写这份调查问卷，由于样本有限，您的回答将是此项的重要依据。您真实的想法就是最好的答案。请您依次回答每一个问题，谢谢您的合作!

下面是批判性思维能力在性格上所表现出来的特质，从你的情况看，他们当中有些特质可能你是非常赞同的，有些特质可能你是非常不赞同的。请根据你自己的情况来判定它们。

程度	非常赞同	相当赞同	比较赞同	比较不赞同	相当不赞同	非常不赞同
代码	1	2	3	4	5	6

如果你非常赞同这一特质就在该题号前填 1

如果你相当赞同这一特质就题号前填上 2

如果你比较赞同这一特质就题号前填上 3

如果你比较不赞同这一特质就题号前填上 4

如果你相当不赞同这一特质就题号前填上 5

如果你非常不赞同这一特质就题号前填上 6

请注意，该测试共七项，每项十条，请据自己的情况来进行真实评定，不要有遗漏，并把选项代码填入各项题前括号内。

一. 寻找真理

- () 1. 面对有争议的论题，要从不同的见解中选择其一，是极不容易的。
- () 2. 对某件事如果有四个理由赞同，而只有一个理由反对，我会选择赞同这件事。
- () 3. 即使有证据与我的想法不符，我都会坚持我的想法。
- () 4. 处理复杂的问题时，我感到惊惶失措。
- () 5. 当我表达自己的意见时，要保持客观是不可能的。
- () 6. 我只会寻找一些支持我看法的事实，而不会去找一些反对我看法的事实。
- () 7. 有很多问题我会害怕去寻找事实的真相。
- () 8. 既然我知道怎样作这决定，我便不会反复考虑其他的选择。
- () 9. 我们不知道应该用什么标准来衡量绝大部分问题。
- () 10. 个人的经验是验证真理的唯一标准。

二. 开放思想

- () 11. 了解别人对事物的想法，对我来说是重要的。
- () 12. 我正尝试少作主观的判断。
- () 13. 研究外国人的想法是很有意义的。
- () 14. 面对困难时，要考虑事件所有的可能性，这对我来说是不可能做到的。
- () 15. 小组讨论时，若某人见解被他人认为是错误的，他便没权利表达意见。
- () 16. 外国人应该学习我们的文化，而不是要我们去了解他们的文化。
- () 17. 他人不应该强逼我去为自己的意见作辩护。
- () 18. 对不同世界观（如：进化论、有神论）持开放的态度，并不那么重要。
- () 19. 各人有权利发表他们的意见，但我不会理会他们。
- () 20. 我不会怀疑众人都认为是理所当然的事。

三. 分析能力

- () 21. 当他人只用浅薄的论据去为好的构思护航，我会感到着急。
- () 22. 我的信念都必须有依据支持。

- () 23. 要反对别人的意见, 就要提出理由。
- () 24. 我发现自己常评估别人的论点。
- () 25. 我可以算是个有逻辑的人。
- () 26. 处理难题时, 首先要弄清楚问题的症结所在。
- () 27. 我善于有条理地去处理问题。
- () 28. 我并不是一个很有逻辑的人, 但却常常装作有逻辑。
- () 29. 要知道哪一个是较好的解决方法, 是不可能的。
- () 30. 生活的经验告诉我, 处事不必太有逻辑。

四. 系统化能力

- () 31. 我总会先分析问题的重点所在, 然后才解决它。
- () 32. 我很容易整理自己的思维。
- () 33. 我善于策划一个有系统的计划去解决复杂的问题。
- () 34. 我经常反复思考在实践和经验中的对与错。
- () 35. 我的注意力很容易受到环境的影响。
- () 36. 我可以不断谈论某一问题, 但不在乎问题是否得到解决。
- () 37. 当我看见新产品的说明书复杂难懂时, 我便放弃继续阅读下去。
- () 38. 人们说我作决定时过于冲动。
- () 39. 人们认为我作决定时犹豫不决。
- () 40. 我对争议性话题的意见, 大多跟随最后与我谈论的人。

五. 批判性思维的自信心

- () 41. 我欣赏自己拥有精确的思维能力。
- () 42. 需要思考而非全凭记忆作答的测验较适合我。
- () 43. 我的好奇心和求知欲受到别人欣赏。
- () 44. 面对问题时, 因为我能作出客观的分析, 所以我的同辈会找我作决定。
- () 45. 对自己能够想出有创意的选择, 我很满足。
- () 46. 做决定时, 其他人期待我去制定适当的准则作指引。
- () 47. 我的求知欲很强。
- () 48. 对自己能够了解他人的观点, 我很满足。

() 49. 当问题变得棘手时，其他人会期待我继续处理。

() 50. 我害怕在课堂上提问。

六. 求知欲

() 51. 研究新事物能使我的人生更丰富。

() 52. 当面对一个重要决策前，我会尽力搜集一切有关资料。

() 53. 我期待去面对富有挑战性的事物。

() 54. 解决难题是富有趣味性的。

() 55. 我喜欢去找出事物是如何运作的。

() 56. 无论什么话题，我都渴望知道更多相关的内容。

() 57. 我会尽量去学习每一样东西，即使我不知道它们何时有用。

() 58. 学校里大部分的课程是枯燥无味的，不值得去进修。

() 59. 学校里的必修课目是浪费时间的。

() 60. 主动尝试去解决各样的难题，并非那么重要。

七. 认知成熟度

() 61. 最好的论点，往往来自于某个问题的瞬间感觉。

() 62. 所谓真相，不外乎个人的看法。

() 63. 付出高的代价（如：金钱、时间、精力），便一定能换取更好的意见。

() 64. 当我持开放的态度，便不知道什么是真，什么是假。

() 65. 如果可能的话，我会尽量避免阅读。

() 66. 对我自己所相信的事，我是坚信不疑的。

() 67. 用“比喻”去理解问题，像在公路上驾驶小船。

() 68. 解决难题的最好方法是向别人问取答案。

() 69. 事物的本质和它的表象是一致的。

() 70. 有权势的人所作的决定便是正确的决定。

Appendix B. Post-Trial Survey for the English Reading Course

英语阅读调查问卷

同学们：

你们好！为了了解你们这一学期的英语学习和批判性思维阅读状况，优化英语阅读教学和学习方式，我们制定本调查问卷。请你按照你的实际情况回答。非常感谢同学们的合作！

年级： 班级： 专业：

1. 你认为通过本学期各个单元的补充阅读材料的学习，你的英语阅读理解、分析、概括、联想、鉴赏和评判能力有提高吗？
A. 提高显著 B. 有提高 C. 提高甚微 D. 没有提高
2. 你认为英语阅读课最应该具备什么能力？（可选三项，并按重要程度排列）（多选）
A. 学习能力 B、沟通能力 C、自我调节和控制能力 D、道德素质
E、创新能力 G、思维能力 H、耐挫能力 I 良好的心理素质 J、其他
3. 通过本学期的英语阅读补充材料学习，和分组讨论及对比分析活动，我觉得自己看问题的视野和角度更开阔了，更乐意接受新事物和新观点。
A. 非常同意 B. 比较同意 C. 相当不赞同 D. 非常不赞同
4. 通过本学期的英语阅读学习，使我在英语阅读中，面对不同类型文章，有助于我更清楚的了解作者的目的是，从整体上把握文章的结构和思路。
A. 非常同意 B. 比较同意 C. 相当不赞同 D. 非常不赞同
5. 通过本学期的英语阅读补充材料学习，和分组讨论及对比分析活动，我觉得自己在以后的阅读中，面对不同的观点，能够独立做出较为客观的评价。
A. 非常同意 B. 比较同意 C. 相当不赞同 D. 非常不赞同
6. 在本学期英语阅读各个单元补充阅读材料和活动过程中，你认为你自己：
A. 坚持自我激励和积极参加 B. 为完成学习任务而被动参加

C. 缺乏动力和自律

7.

你喜欢本学期各个单元提供的补充材料吗？你各人倾向于阅读哪一类的英语阅读材料？（如英文小说，科普文选，大学英语四六级阅读题，考研英语阅读，雅思阅读，报纸杂志或电影，网上资料，其它阅读教材等）

8. 通过本学期的英语阅读补充材料学习，小组讨论，对比阅读分析活动，和互相问答，你感觉有什么收获？对课堂活动有何改进的建议？

9. 在本学期各个单元补充材料的学习过程中，你感觉老师的指导/引导够不够？你还想得到老师其它什么方面的引导？

10. 如果再有会，你还会选择这种英语阅读和学习方式吗？为什么？

Relationship between Critical Thinking Dispositions and Critical Reading Skills of Malaysian ESL Learners

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Abstract

Critical thinking disposition, an inclination (Facione, Facione & Giancarlo, 2000) or tendency (Stunipsky, Renaud, Daniels, Haynes & Perry 2008) to use critical thinking skills, is one of the essential components in critical thinking. It is posited to play a positive role in influencing one's cognitive behaviour in thinking (Giancarlo & Facione, 2001, Smith, 1992). Therefore, a strong inclination to think critically can positively influence a reader to exercise critical thinking skills when reading critically. This study explores for the first time the relationship between the critical thinking disposition and critical reading skills of Malaysian ESL learners. A total of 374 Malaysian ESL learners participated in the study. Their dispositions were measured by the California Critical Thinking Disposition Inventory (CCTDI), an instrument that measures seven critical thinking dispositional scales: truthseeking, openmindedness, analyticity, systematicity, confidence, maturity of judgment and inquisitiveness. A self-developed critical reading comprehension test (CRCT) measured the students' critical

reading skills of evaluation and analysis. The findings showed that the level of the students' critical thinking disposition was average with a strong disinclination on the truthseeking scale and ambivalent disinclination on the openmindedness, systematicity and maturity scales. Subsequently, the results of the CCTDI were corroborated with the analysis of the open-ended comprehension questions that measured the critical skills of analysis and evaluation. The findings indicated that, to a certain extent, their lack of dispositional attitudes, i.e., truthseeking and openmindedness, toward critical thinking were reflected in their critical reading performance. The implication from the findings of the study suggests that we should rethink critical reading instructional designs that include explicit instruction on how to foster positive critical thinking habits.

Keywords: critical thinking disposition, critical reading (comprehension) ability, ESL learners

Introduction

One of the major concerns among reading researchers, either in first language (L1) or second language (L2), is students' performance in academic literacy, i.e. their ability to evaluate and analyze information contained in the texts they encounter every day. Many reading researchers and educators in Malaysia have claimed that local university students are not prepared to engage in demanding reading tasks (Koo, 2003, 2008, 2011; Pandian, 2007). Crismore (2000) concludes that most Malaysian university students are ill-prepared for academic reading and lack the ability to read critically the information contained in their textbooks. Malaysian students generally do not critically question the information that they read because they are accustomed to conformity of power, loss of face (when their views are found to be fallacious), and fear of being different (Koo, 2003). In view of this, the public and the educators alike, have noted the critical need for Malaysian students to engage in higher-order thinking and reading skills (Koo, 2008, 2011; Pandian, 2007).

Critical reading primarily requires a reader to employ critical thinking (CT) skills while reading a text (Douglas, 2000; Thistlewaite, 1990). The process involves a range of higher-order cognitive skills such as reasoning, making inference, evaluating and analysis (McLaughlin & DeVogd, 2004). However, one of the characteristics of a good critical reader is not only defined by one's ability to read critically but also by one's disposition to think critically. Disposition essentially involves readers' spirit of inquiry (Pithers & Soden, 2000)

or inquisitiveness and open mindedness (Giancarlo & Facione, 2001), willingness to engage in a complex task and persistence in that effort, flexibility, and willingness to weigh the credibility of the evidence provided (Sears & Parson, 1991). There is thus a growing consensus that any conceptualization of critical thinking without taking into account critical thinking dispositions is incomplete (Ennis, 1987; Perkins, Jay & Tishman, 1993).

Interestingly, issues in CT and CT dispositions (Littlewood, 1999, 2000) and L2 reading development (Grabe, 1995) are complex phenomena particularly when they involve cultural variations. Many studies tended to compare the thinking skills and attitude between western and Asian learners (Kumaravadivelu, 2003; Littlewood, 1999; Schommer-Aikins & Easter, 2008; Stapleton, 2002). Normative assumptions about Asian or East Asian students are that they are collectivists who tend to be harmonious and passive, and who are typically contrasted with their more individualistic western counterparts who display adversarial attitudes and a higher tendency to think critically (Atkinson, 1997; Ramanathan & Kaplan, 1996). This has led to the stereotyping of Asian or East-Asian students as those who display a surface approach to learning, and reluctance to question authority and to think for themselves. On the local scene, Malaysian students are often labeled as lacking in their ability to think and read critically (Crismore, 2000; Koo, 2003, 2011). Their lack of ability to think and read critically is often attributed to these stereotypical attributes (Abdullah, 1996), school education systems (Koo, 2011) and secondary school reading curriculum (Mohd. Sidek, 2011). Therefore, many researchers and educators, both westerners and East Asians, have provided counter-arguments to the stereotypical descriptions of many East-Asian learners (see Gan, 2009; Kumaravadivelu, 2003; Littlewood, 2000, 1999; Stapleton, 2002). Students' responses in questionnaire surveys conducted in these studies were found to contradict the stereotypical assumptions of the Asian and East-Asian learners, that is, they were passive learners and obedient students. The conclusions drawn from these studies were that East-Asian learners had been, up till then, labeled inaccurately. However, these conclusions need to be carefully analyzed as many of the studies that examined cross-cultural differences utilized survey questionnaires, which were not adequately supported by qualitative evidence to further substantiate such a claim.

A strong and consistent internal motivation (Facione, Facione & Giancarlo, 2000) or willingness to think critically would drive a reader toward the application of critical thinking skills in reading. Good critical thinkers' dispositions are characterized by having a spirit of inquiry, being openminded, being able to draw unwarranted assumptions cautiously and being able to weigh the credibility of evidence (Pithers & Soden, 2000). In view of this, it is

hypothesized that a possession of positive critical thinking dispositions will produce good critical readers. Thus, the aim of this study is to identify the level of critical thinking dispositional attributes and explore the relationship between critical thinking dispositions and critical reading skills of Malaysian ESL tertiary students. In view of this, the study was predicated upon the following two research questions:

- i) What is the overall critical thinking dispositional profile of Malaysian ESL students?
- ii) What is the relationship between the students' level of critical reading skills, on the one hand, and their critical thinking dispositions, on the other?

Theoretical perspectives

This study is framed by the sociocognitive perspective of reading which views literacy as not merely an act of reading and writing but in a broader sense that incorporates “reading and writing as ways of thinking about the language and text” (Larger, Bartolome, Vasque & Lucas, 1990, p. 431) and meaning making processes (Gee, 2001; Ruddell & Unrau, 2004). Reading as a social and cognitive process suggests that it is an active process which involves interpretation, reflective inquiry and critical interpretation (Kern, 2000). Put differently, it is a higher-order mental act which involves the interplay of complex and active processes of various cognitive and social factors (Brantmeier, 2003; Vygotsky, 1978). Ruddell and Unrau’s sociocognitive theory (2004) characterizes a reader as consisting of two major components: cognition and affect. Cognition is an integral part of the reading process as reading cannot take place without thinking activities (Bartu, 2001; Hennings, 1999). In a critical reading context, the cognitive aspects of reading underscore the execution of several important cognitive operations such as higher-order thinking skills, metacognitive awareness and monitoring, as well as activation of relevant background and world knowledge. Higher-order reading skills that involve analysis, synthesis and evaluation (Flynn, 1989) are required in critical reading because it is a process that goes beyond literal meaning (Fisher, 2001). Thus, such a process requires an analytic mind to judge the value and to unpack the meaning of a text (Thistlewaite, 1990). These cognitive resources are socially shaped and embedded in various social contexts that influence the meaning construction of language and text (Larger, 1987; Larger, Bartolome, Vasque & Lucas, 1990). In fact, much reading research has positioned reading as a social process which emphasizes the role of readers’ cultural and social interaction in meaning construction. As Cook-Gumperz puts it succinctly “Literacy is a socially constructed phenomenon” (1986; p. 1). This approach underscores the importance of

values, feelings, attitudes, beliefs and social relationship in text production and consumption (Gee, 2001; Ruddell & Unrau, 2004; Wallace, 2003) as it views the reading process as an active interpretation of the meaning of the text rather than merely decoding the print (Kern, 2000). And it is best viewed through a unique interaction or active collaboration between reader, text and context (Ruddell & Unrau, 2004).

Readers bring their unique features into the process during their engagement with the text, characterized by their cognitive and affective conditions. Readers' background knowledge which constitutes the knowledge of a particular domain and field and world knowledge are important characteristics that they bring to the reading process, along with other elements such as skills (e.g. decoding, high level thinking), linguistic knowledge, cognitive development, culture, purpose and affective factors (Pardo, 2004). One of the affective components, i.e. one's dispositions in thinking play a role in influencing readers' mental processes. Critical thinking disposition refers to one's inclination (Giancarlo & Facione, 2001) or behavioral tendencies (Perkins, Jay & Tishman, 1993; Stupnisky, Renaud, Daniels, Haynes & Perry (2008) to use critical thinking skills. The characterological components and the cognitive abilities are reflected in theoretical characterizations of critical thinking (Glaser, 1984; Paul, 1990). A strong and consistent internal motivation (Facione, Facione & Giancarlo, 2000) or willingness to think critically would drive a reader toward the application of critical thinking skills in reading. A strong tendency to exercise good thinking habits, such as being openminded, persistent in seeking the truth, analytical and inquisitive in finding evidence to support before accepting the views offered, will positively motivate readers to think analytically, independently and critically. Therefore, efficient performance in reading a text critically also requires readers to possess positive dispositions to think critically. Strong and positive critical dispositional attributes, which result in the willingness to be a reflective reader, will influence readers to engage with the information in the text more critically by evaluating and analyzing the information.

Theoretically, Stupnisky, Renaud, Daniels, Haynes and Perry (2008) posit that these two components, thinking skills and disposition, are interdependent in that when a reader has the critical thinking skills but lack the motivation and willingness to apply those thinking skills in reading, the inclination or tendency to use thinking skills diminishes. Alternatively, if a reader is motivated to apply the critical thinking skills during reading, but have not acquired strong basic skills in critical thinking, the motivation will decrease after a while. It is the integration of all these higher-order cognitive skills and affect (e.g., motivation/ inclination and attitude/ disposition) that characterize the critical reading ability of a reader.

Methodology

Participants

The participants for this study were three hundred and seventy-four (374) Malaysian ESL students at a local university aged between 17 and 19 years. The students were selected through stratified convenient sampling procedures. The ESL students were from various fields of study: Engineering (37%), Information Technology (26%), Architecture (16%) and Management (21%). They attended compulsory English proficiency classes as part of the requirements of the university. The Academic Office of the University grouped them into their respective proficiency courses: English for Communication (C=44%) and Business English (B=56%). Students were selected randomly from each program based on their proficiency to allow the representation from the various disciplines. The final breakdown of the students is as follows: Engineering (C=36%, B=64%), Information Technology (C=33%, B=67%), Architecture (C=41%, B=59%) and Management (C=42%, B=58%).

Six of the students' written responses to the open-ended questions in the critical reading comprehension test were purposively selected and analyzed for critical reading patterns for cross-validation with the findings of their critical thinking disposition.

Materials

California Critical Thinking Dispositions Inventory (CCTDI)

The CCTDI, developed by Facione and Facione (1992), was utilized to measure the students' dispositional attributes in thinking critically. The CCTDI consists of 75 Likert style items. There are seven (7) measured scales: *inquisitiveness*, *open-mindedness*, *systematicity*, *analyticity*, *truth-seeking*, *critical thinking self-confidence* and *maturity*. The descriptions of the scales are as follows:

1. *The inquisitiveness* scale measures one's intellectual curiosity and one's desire for learning even when the application of the knowledge is not readily apparent.
2. *The open-mindedness* scale measures the ability to be tolerant of divergent views and recognize one's bias.
3. *The systematicity* scale addresses one's predispositions towards being organized, orderly and persistent in inquiry.
4. *The analyticity* scale measures one's willingness to apply reasoning skills in finding supporting evidence before reaching a conclusion or accepting the validity of the views or options available to the individual.

5. *The truth-seeking* scale measures one's eagerness in seeking the best knowledge, asking questions, and being honest and objective in one's thinking. A truth-seeking person also evaluates new information and evidence continuously.
6. *The critical thinking self-confidence* scale addresses the trust of one's reasoning processes in order to lead him to reaching sound judgment on a particular issue.
7. *The maturity* scale refers to one's predisposition towards making sensible judgment in the decision making process.

The scales were reported to be discipline neutral in that they can be interpreted across the arts, sciences, as well as professional disciplines (Facione & Facione, 2010). The CCTDI was developed through rigorous procedures. First, the prompts were written to describe the dispositional attitude ideal for critical thinkers. It resulted in 250 prompts which were screened by college level critical thinking educators. Fifteen (15) prompts were selected and they were piloted on college students at two universities in the US and Canada. Finally, 75 items were retained in the final form of the instrument based on a factor analysis.

Critical Reading Comprehension Test (CRCT)

A reading comprehension test which consisted of two different text types (A and B) was administered to measure the students' critical reading skills. Text A is a letter to the editor while Text B is an argumentative text. Text A consists of two (2) sections: i) open-ended questions, and ii) fact versus opinion questions. Text B consists of three (3) sections: i) open-ended questions, ii) fact versus opinion questions, and iii) true and false questions. The total score for the CRCT is 42: 21 for Text A and 21 for Text B. The test items were developed according to Bloom's taxonomy (Krathwohl, 2002). The questions measured the skills of evaluation and analysis. The test paper underwent a rigorous moderation and vetting process by a committee. The committee, made up of four experienced language instructors, was collectively responsible for the vetting of the test paper. The committee was given the task to determine the acceptability of the paper that measures critical reading skills. The members were briefed on the vetting procedures and they were provided two samples of critical reading comprehension questions for their reference. They were also briefed on the types of assessment components described in Worden's Critical reading assessment components (1981) prior to the moderation process. After they had vetted the paper and the answers key, the texts were corrected according to the comments and recommendations made by the committee. The paper which had been edited and modified was presented again to the

committee for their final assessment. The paper was piloted and administered after the committee approved the amendments made on it.

Tasks and Procedures

The data was collected after obtaining verbal permission from the respective language instructors of the various classes at the local university. The data was collected in their classes during their normal meeting hours. The duration of each class was 110 minutes and they met twice a week. First, the students sat for Text A of the CRCT and they were given 45 minutes to answer the questions. The second text, Text B, was administered in their second meeting. The CCTDI was administered after the students had completed the CRCT and they were allotted an hour to respond to the prompts.

Data Analysis

CCTDI

The total score of the CCTDI was the sum of scores of the seven (7) subscales being measured. The score of each of the seven subscales for a student would range from a minimum of 10 points to a maximum of 70 points. The scores were interpreted using the following guidelines. A score of 30 and below indicates a weak critical thinking disposition. A score of 40 indicates a minimal endorsement of average disposition while scores above 50 demonstrates a strong positive endorsement of the characteristics. Students who score above 280 have a strong positive disposition towards critical thinking (Facione & Facione, 1992). To further investigate the significance of individual affective dispositions in CT, each of the students' scores was assigned to one of three categories for each of the seven subscales in the CCTDI. The students were grouped into three dispositional groups: positive, ambivalent and negative. The grouping is based on the findings of a study by Giancarlo and Facione (2001). In the study, the positive dispositional group comprised subjects' whose scores were either 40 points or higher on the attribute scale. The ambivalent dispositional group refers to those whose score was between 31 to 39 points and, finally, the negative dispositional group consists of those who scored 30 points or lower. The recommended cut-off points when interpreting the CCTDI are above 40, between 31 and 39 and below 31 (Facione & Facione, 1992). The overall scores on the CCTDI were computed by summing up the scores of the seven subscales. The scores would range from a minimum of 70 points to the maximum of 480 points. Similar interpretative guidelines were used for the overall scores of the CCTDI. A total of 280 points or higher indicates a positive overall disposition towards critical thinking,

whereas, a total score of 210 or lower indicates a negative disposition towards critical thinking.

CRCT

The CRCT responses were scored based on the approved scoring rubric which was vetted by the moderation committee. The papers were scored by the researcher as the first rater. As some of the comprehension questions require subjective judgments, a second rater, who was one of the moderation committee, was appointed. The inter-rater reliability was .82.

The responses to the open-ended comprehension questions in the CRCT were analyzed and coded according to the critical reading skills of evaluation and analysis. The students' responses were analyzed to obtain more information on their ability in these skills. Apart from that, the analysis of the critical reading skills would provide more information on the students' inference and reasoning skills which were the underlying higher-order thinking skills required to answer the questions. The responses also were analyzed for the pattern of the students' critical reading dispositions, i.e. their questioning attitude. The findings of the students' responses were corroborated with the scores of the CCTDI scales in order to enhance and validate the findings on the students' critical reading ability and disposition.

Results

The dispositional profile of the students

The means, standard deviations, and range of scores for each of the seven subscales and the total score of the CCTDI are reported in Table 1.

Table 1: Means and standard deviations (SD) on the CCTDI (n=374)

Subscale	*Mean	SD	Range
Truthseeking	27.90	5.21	13 – 42
Openmindedness	38.39	4.61	20 – 53
Analyticity	42.09	4.78	30 – 55
Systematicity	37.73	5.55	18 – 55
Self-confidence	40.77	6.92	21 – 60
Inquisitiveness	48.71	5.67	22 – 60
Maturity	35.33	6.29	12 – 55
Total	*270.89	22.16	203 – 341

Note: Critical thinking total mean score: strong disposition >350, positive inclination 280-350, ambivalent 210-279, strong opposition <210.

Critical thinking subscale means score: strong disposition >50, positive inclination 40-50, ambivalent 30-39, strong opposition <30

Based on the data shown in Table 1, it is reasonable to describe the students' overall dispositional profile as merely average. The overall total score of 270.89 is below the cut-off point of 280, i.e. the score that marks positive dispositions (Facione & Facione, 2010). The mean scores were above 40 on three of the seven subscales. These results suggest that the students are less inclined to engage in critical thinking activities in their daily lives. The students scored the lowest in the truthseeking subscale (mean=27.90) which suggests that they are highly resistant towards seeking the truth in anything that they encounter. This result indicates that they are negatively inclined towards being courageous in asking relevant questions, evaluating new information in order not to let any bias affect their search for the truth, and being honest and objective about pursuing the inquiry even though it is against their own beliefs.

In the other subscales, the students exhibited some degree of disinclination towards openmindedness (mean = 38.39), systematicity (mean =37.73) and maturity (mean = 35.33). The range of their critical thinking inclination for these three dispositional scales is between ambivalent and positive but tends to lean toward the ambivalent mean range. The mean for the openmindedness subscale suggests the students' attitude of being close-minded, implying that they have low tolerance towards the opinions of others and lack consideration for other alternatives in assessing the issue at hand. The low mean score in the systematicity subscale suggests that the students are less organized in the way they manage the issue or problem that they face. In addition, they are less judicious and tend to be imprudent in making or revising their judgment since they have a low score on the maturity subscale. They, however, are found to be positively disposed toward analyticity (mean=42.09) and self-confidence (mean=40.77). Positive dispositions in these two subscales indicate that the students consistently endorse the critical dispositional attributes in applying reasoning and using evidence during the decision making process. Positive inclination towards the self-confidence subscale addresses the issue of one's confidence in his or her reasoning processes. The score indicates that they confidently trust their judgment and reasoning when making their decision. The highest mean score in the CCTDI is the inquisitiveness subscale (mean=48.71) which underscores their strong critical dispositional attribute towards intellectual curiosity and their desire in developing their knowledge in a given context or situation (Facione & Facione, 2010).

Based on the findings from the CCTDI, the students' critical thinking dispositional characterization can be summarized as:

- i) negatively inclined towards seeking the truth in anything that they encounter and negatively disposed to being honest and objective in pursuing inquiry,
- ii) disinclined towards being openminded, being focused and organized, and being judicious in their decision making actions,
- iii) positively inclined towards applying reasoning skills and using evidence in resolving their problems, and
- iv) positively disposed to being judicious in the decision making process and possessing confidence in their higher-order cognitive ability in the application of their reasoning skills.

In a study, Yeh and Chen (2003) examined the dispositional attributes of Chinese and American students. The overall score of the CCTDI of the Chinese students was 283, which was slightly above the cut-off point of 280. They were outscored by their American counterparts who had an overall score of 303.24. However, the Malaysian students in this study were outscored by the Chinese students in Yeh and Chen's study, i.e., 270.89 versus 280 respectively.

In relation to the results of their study, Yeh and Chen (2003) attributed the Chinese dispositional attitude to the Confucian philosophy which governs the learners' way of life. The ethics of Confucianism emphasize the principle of humanity and the spirit of sincerity. Other than that, the "cosmic, mysterious and absolute principle of Taoism" and "righteousness" from Mohism, and the principle of Buddhism each also played a role in shaping their dispositional attitudes (Yeh & Chen, 2003, pp. 43-44). However, further clarification on the manner in which these underpinning religious and philosophical virtues of Confucianism, Taoism and Mohism shaped their attitudes towards critical thinking was not explained in the article. In other words, students' scores on the CCTDI could be influenced by their cultural background.

Further analysis of the students' inclinations to think critically was conducted in order to determine the dispositional group that most of them belong to. They were grouped according to their individual scores on the seven dispositional subscales in the CCTDI. Table 2 presents the frequency in percentage of the students that belong to each of the dispositional groups.

Table 2: Frequency of the dispositional groups in percentages

Dispositional group	Percentage
Negative	0.5%
Ambivalent	65%
Positive	32%

By categorizing the students into three major dispositional groups, more insight is provided into their attitude towards thinking critically. The majority of the students fell into the ambivalent group, a result which is in line with earlier findings (of the CCTDI mean scores) which showed that the students' level of disposition was only average.

It is interesting to note that a weak dispositional attribute in the truthseeking subscale appears to be a common trait among pre-university and other university students. Table 3 below shows the mean scores of the truthseeking scale from five other studies.

Table 3: Comparison of mean scores in the truthseeking subscales from the various studies

	Studies	Subjects	Mean scores in Truthseeking scale
1.	Facione et al. (1995)	University cohort	35.36
2.	Bers et al. (1996)	Community cohort	31.44
3.	McBride et al. (2002)	Preservice teachers	34.87
4.	Yeh & Chen (2003)	Baccalaureate students	30.97 (Chinese) 39.15 (American)
5.	Zuhana & Wong (2011)	Diploma students	27.90

The mean score of the truthseeking scale of the students in this study is lower than the Chinese and the Western university students. As seen in Table 3 above, the Chinese and the Malaysian students exhibited lower mean scores in the truthseeking scale than their Western counterparts. This suggests that Asian students had a lower degree of willingness to seek the truth and ask questions in their daily lives than their Western students.

The results of the CCTDI of the students in this study provide empirical evidence that supports the anecdotal observations (Crismore, 2000) of practitioners and the literature (Koo, 2003; Pandian, 2007), as well as views expressed by some Malaysian educational practitioners of Malaysian students' critical thinking dispositions, i.e., their lack of inclination

to think critically. The marked differences in the dispositional attitudes among the Malaysian and Chinese students who represent Asian learners, and American students who represent Western learners are part of the prevalent issue that looks at attitudinal traditions between Asian and Western students. Asian students are typically characterized as non-critical thinkers. In addition, they are described as harmony-seeking, and group-oriented while their western counterparts are known for their individualistic, adversarial and critical thinking attitude. Littlewood (1999) attempted to refute such claims by conducting a survey among students in eight East Asian countries. A total of six hundred and five (605) Malaysian secondary and university students participated in the study and it was found that 40% and 16.2% disagreed and strongly disagreed respectively to a statement “In a classroom, I see the teacher as somebody whose authority should not be questioned”. In addition, based on their responses, they indicated that they did not wish to obediently listen to their teacher and sit passively in the classroom absorbing the knowledge imparted by the teacher. Littlewood (2000) argued that the overall responses by the students from the countries that participated in the study demonstrate that the stereotypical learning attitude of the Asian learners is not the inherent attitude of the learners. Rather, the often claimed passive attitude of most Asian learners in the classrooms is due to the educational traditions at all levels. While it is convenient to claim that the students are indeed active and independent learners based on the findings of the study, it is still doubtful that this reflects the reality of their true behavioral patterns in the classroom.

Critical reading comprehension performance (CRCT)

The analysis of the open-ended comprehension questions in the CRCT provides more understanding of the students’ evaluative and analytical skills in reading. The assessment in recognizing fallacious and warranted claims, and writer’s attitude measured evaluative and analytical skills. The analysis also provides further insight into the students’ thinking and reading behavior.

Evaluation

Recognizing fallacious and warranted claims, and justifying claims

The students were required to i) answer ‘yes’ or ‘no’ to the claim – indicating whether the claim by the writer is justified, and ii) provide reasons and evidence to support their answer in question i). Examples of the questions are shown below.

valid reasons, and strong evidence to support their answer. The analysis of the open-ended questions found two patterns of the manner in which the students justified their answers. Below are some of the typical answers that they provided in support of their agreement with the writer's claim.

Direct quotation from the text

One of the ways the students justified their answer was to quote directly from the text. Examples of some of the responses are as follows (verbatim):

P1: "It is true because fatty acid is one of the sources of heart attacks", "It justifies because margarine can cause heart attacks",

P2: "because margarine makes us unhealthy, blocking our blood arteries", and "because the number of people dies are increasing every year (due to heart attack)".

P3: "... they contain carcinogen, cholesterol and chemical contaminants".

In quoting directly from the text as a means of justifying their answer indicates that the students were not able to exercise their reasoning skills. This also shows that they unquestionably believed the information presented by the writer.

Personal answer

Some students attempted to provide their own justifications, for example:

P4: "because it had been said from food police which are health conscious people. They have done research before".

The first part of the answer shows that the student believed what was claimed by the 'authority' (health conscious people) and the second statement indicates the student's assumption of what he believed was true based on his knowledge of the world, i.e. most claims on health are typically made based on research. However, this line of thinking was flawed because the assumption was made without concrete evidence from the text that the health conscious people have done any research.

P5: "Because it is true that fatty acids is not good for our health as it blocks the arteries that will lead to heart attack"

P6: "Because in magazines or papers, fatty acids is found to be dangerous to our body as it can cause heart attack"

In this case, the students used their prior knowledge to answer the question; however, it failed to justify that the claim made by the health police due to the absence of any sound evidence to support the answer given. They did not question the credentials of the health conscious people.

The answers given by the students indicated that they unquestionably agreed and believed the information presented to them which suggest that they did not engage their evaluative and analytical skills, leading them to merely read the text at a superficial level.

The examples of the questions in Text B are shown below.

- i) The writer claims that vitamins intake is not good for the body. Do you think that his claim is justified? Yes or No? (*Recognize fallacious claim*)
- ii) Why? Provide justification/explanation for your answer. (*Justification*)

Text B is an argumentative essay which discusses the issue of common practice and beliefs among the public in taking multivitamins in their daily lives. While Text A contained more uninformed opinions, Text B contained views of multiple perspectives on the intake of multivitamins which were supported by research carried out by prominent figures in medical science. The students fared better in this text (30%) compared to Text A (21%) as a higher number of students was able to provide the information on the extensive studies by some researchers that have shown the opposite effects of multivitamin intake. However, similar thinking patterns were observed in their responses in that a majority of them, i.e. 79% of them, were unable to distinguish between fallacious and warranted claims. In addition, they were unable to offer sound reasons for their answers. Below are some of the students' responses:

Direct quotation from the text

P1: "some multivitamins run as much as 1500 micrograms a pill which is twice the recommended daily amount and the level that could double the risk of bone fractures"

P2: "because those who take vitamins were more likely to contract what they meant to prevent"

P3: "the people are deluding themselves if they thought multivitamins could make up for poor diets.

Similar to the earlier question (Text A) in recognizing fallacious claims, the students typically quoted the information in the text to justify their answers, showing that they were not able to think and write the answers in their own words.

Quotation from the writer's idea

P4: “because the writer state that taking too much of Vitamin A will give a greater risk of osteoporosis”

P5: “because by taking multivitamin or vitamin can make our health more worse and this is the justification of the writer”

P6: “because vitamin intake is not good for the body because it cannot prevent any disease and can make harm our body”

Earlier analysis of the students' ability to recognize fallacious and warranted claims showed that they did not only lack the ability to exercise their evaluative skill; in addition, they were found to quote directly from the text or to quote the writer's idea in an effort to justify their answers. This thinking behavior demonstrated that they unquestionably accepted and believed the writer's ideas. Another assessment component in the CRCT was the ability to analyze the writer's attitude.

Analysis

Identifying and providing justification for the writer's attitude

The students were assessed in their ability to identify the writer's attitude when expressing his point of view in the article. This skill requires an analysis of the writer's words or phrases that implied the writer's attitude. The questions required the students to i) recognize and identify the writer's attitude and ii) provide reasons to support the choices of the writer's attitude (represented by a *why*-question). This question assessed higher-level inference skills. In order to justify the writer's attitude, students were require to tap on their higher level inference skills which entail more complex thinking such as good reasoning skills in order to provide sound reasons to support their answers (Applegate, Quinn & Applegate, 2002). Below are the examples of both types of questions.

Text A

i) What can best describe the author's attitude on the claims made by the medical scientist on the bad effects of certain food on people? Tick (✓) the correct option. (**Recognition**)

say”

P6: “because the writer says he will engage in these simple pleasures and he will eat in moderation”

Quoting directly from the text has been found to be one of the most popular ways to provide reasons for their answer. The responses above, again, show that the students’ lacked the reasoning skill as they were not adequately competent in justifying their answers in their own words.

Agreement with the writer’s view

P1: “because the writer’s statement is true fact and it is fair”

P2: “Because certain food that contains harmful chemical that will bring a bad effect towards people”

P3: “It will make damaged or injury to our bodies”

A similar pattern was found on the manner in which the students they answered the *why*-question and how they justified their answer. Most of the students typically either quoted the ideas of the writer in the text or quoted the sentences or phrases directly from the text, indicating their lack of ability in answering higher order comprehension questions that require the inferencing and reasoning skills. Most of them showed a similar pattern of thinking behavior based on their answers across all the open-ended questions quoted in that they either quoted directly from the text or quoted the writer’s idea to justify their answers. This pattern of behavior indicated that they unquestionably believed and accepted the information presented by the writer in the text as a truth.

The association between critical reading ability and critical thinking dispositions

In summary, the findings show that the students lacked the critical reading skills (evaluation and analysis) and the underlying critical thinking skills (inference and reasoning). The students’ responses to the open-ended questions demonstrated the level of their critical reading and thinking skills and behavior. In general, the students’ demonstrated similar critical thinking and reading behavior. The findings from the students’ CRCT scores showed that they were not able to perform well in recognizing and differentiating fallacious and warranted claims, and recognizing the writer’s attitude. This, in turn, resulted in their lack of ability to exercise evaluation and analysis skills in judging the validity of the arguments of the

writer. The inability to exercise this higher-order thinking skill seemed to have affected the students' ability to judge the validity of the argument put forth by the writer (see Quick, Zimmer & Hocevar, 2011). This is because evaluating claims entails execution of cognitive processes such as evaluating the evidence, examining the construction of the evidence and weighing the strengths and flaws in the evidence that support the premises.

The analysis of the students' written responses to the open-ended questions has provided more insights into the students' lack of disposition to think and read critically. The students typically quoted the writer's ideas or quoted the sentences and phrases directly from the text to justify their answers. This pattern of responses was evident for the open-ended questions that required them to provide their own answers. The finding here indicates that the students were rather weak in their ability to give evidence, reasons and justifications for their beliefs and opinions, an indication of weak critical thinking-reading skills since it has been suggested that efficient thinking skills are represented by the students' ability to identify and provide good reasons for their opinion and also for their beliefs and actions (Ennis, 1985; Lipman, 1988).

In quoting the text directly and quoting the writer's ideas in the text, the students seemed to have unquestionably believed and accepted the ideas presented by the writer. This is evidence of their lack of willingness to try their best to find the truth in a written piece which also shows that they were not disposed to arrive at their own answers. Thus, this finding corroborates with the earlier finding of the CCTDI when the students were found to be negatively inclined in the truthseeking scale, in that they showed a strong disinclination towards asking relevant questions and evaluating new information and evidence to seek the truth in what they encountered and read. It can be deduced that they did not ask relevant questions on the information presented to them and ignored relevant details in the article which affected their judgment.

The fact that the majority of them unquestionably believed the information that the writer presented in the text shows their apparent lack of ability in carrying out the basic principle of critical reading which is to ask themselves relevant questions in order to identify the writer's assumptions and purpose of writing the article, indicating that they do not possess a questioning attitude as part of their reading habit. Good critical readers ask relevant questions during reading because critical reading is quintessentially about questioning (Albro, Doolittle, Lauer & Okagaki, 2009; Mclaughlin & DeVogd, 2004). The act of questioning, through the posing of relevant and important questions, can encourage reading engagement too, for example posing questions such as 'what is the source of the passage?', 'from whose

perspective does the author write?', 'is the writer biased?', 'is the claim justified?', and 'who is the writer?'. These critical questions provide the catalyst for active higher-order cognitive processes to take place. As evidenced by their complete acceptance of the information in the text, the students' reading behavior was most probably due to a lack of questioning attitude during reading.

The findings from the students' written responses also corroborate other dispositional scales in which they were found to show disinclination towards openmindedness. Disinclination on this scale suggests that they were not open to other alternatives and views, lacked persistence in inquiry of the task at hand, and lacked the disposition to make sensible judgments. When they are not disposed to thinking about and asking thought provoking questions about the information in the text and open their minds to other possible explanations, their skills in identifying fallacious claims and inferring the writer's attitude will be affected.

Conclusion

This study has attempted to examine the level of critical thinking dispositions of Malaysian ESL learners and explore the possible association between their dispositional attributes and their ability to read critically. Findings show that the level of their critical thinking dispositions was not only average but also below the cut-off point of positive thinking habits, indicating that the students did not possess good thinking habits. The CCTDI findings were cross-validated with the analysis of the students' responses to the open-ended questions to find out the extent to which the students' critical thinking dispositional attributes were reflected in their critical thinking skills and behavior. The analysis revealed that the students' lack of questioning attitude which corroborates the findings of the CCTDI which show that the overall score was below the cut-off point and the specific scores indicated a negative inclination on the truthseeking and ambivalent inclination on the open-mindedness subscales.

While it is a common belief among Malaysian teachers and educators that Malaysian students lack the ability to think critically (Crismore, 2000; Koo, 2011) and lack the willingness to engage in the critical reading act or practices (Koo, 2008), it is necessary to provide empirical evidence to support these anecdotal observations (Crismore, 2000; Koo, 2011) as well as to support some claims made by local educators (Koo, 2003; Pandian, 2007). Accordingly, this study has attempted to offer such evidence in order to shed light on this important issue. The findings of the study provide some evidence to support that claim that Malaysian learners lack the inclinations in thinking critically as shown in the students' low mean scores in the CCTDI, particularly in the truthseeking, openmindedness and maturity

subscales. These appear to corroborate the findings found in the CRCT, i.e. the students' lack of ability in recognizing fallacious and warranted claims in the texts and in identifying the writer's attitude.

The subjects' low scores in the CCTDI and lack of evaluative and analytical reading skills in this study are presumably due to teaching and learning approaches that are different from those adopted in the Western education system. The dominance of traditional roles of the readers and teachers is still prevalent in educational institutions in Malaysia (Koo, 2008, 2011; Wong & Kumar, 2009). A study by Wong and Kumar (2009) indicates that Malaysian school learners still regard the teacher as an authority who holds a superior position in the classroom: the teacher is "dispenser of knowledge and wisdom" (p. 137) and students were not empowered to control the discourse of learning. This is also echoed in a study in Australia by Robertson, Line, Jones and Thomas (2000) who reported that common comments cited by academic staff of the most compelling characteristics of many Asian and East-Asian learners (including Malaysian undergraduates) are i) their apparent reluctance to "give a personal opinion" or "argue with older person, especially if the older person is in the authority, e.g., the tutor or lecturer" (p. 97), ii) their tendency to "take the word of the book or lecturer as truth, and won't question it. They see learning as receiving the knowledge of an authority. Therefore, to regurgitate text from book etc. is seen as normal learning" (p. 97), iii) they do not have sufficient world knowledge, and iv) they have different discourse patterns from Australian discourse conventions. Thus, a better judgment of their true behavior is more acceptable if their views are translated into real actions in the classrooms. Otherwise, they are still considered as non-critical, passive and dependent learners if they continue to behave in that manner although this might not be a true reflection of their views.

In addition, recent studies have shown that teachers' level of questioning in Malaysian classrooms is still at a low level in that it centers on factual rather than on evaluative questions (Husin, 2006; Nambiar, 2007; Wong & Kumar, 2009). In addition, reading comprehension questions at secondary level were found to emphasize more on the lower end of higher-order skills, i.e. identifying main ideas and supporting details and not on questions that require more important higher-order skills such as evaluation that are essential for the enhancement of critical thinking ability (Mohd. Sidek, 2011). Thus, students are not well-trained or exposed to higher-level of questioning and thinking which have influenced their behavioral patterns that are carried on to college or university level. This could be the reason for the low score on the maturity scale in the CCTDI. Maturity, in the context of

reading, means the maturity to engage in higher-order thinking skills that could make the students less imprudent in accepting the views presented in the texts.

The findings that show the students' CT dispositions and critical reading skills, to a certain extent, provide evidence to support the claims that East Asian students, particularly the Malaysian ESL learners in this study, still lack the willingness to exercise critical thinking, or perhaps lack this ability, in their daily life and also in the reading act. As mentioned in previous case studies (Robertson, Line, Jones & Thomas, 2000; Wong & Kumar, 2009), the stereotypical Asian and East-Asian learners' attributes were still prevalent among the students in this study. The strong inclination in the inquisitiveness, analyticity and confidence scales of the CCTDI prove that results obtained from the survey alone may not give a true picture of the learners' actual dispositional attitude in the process of thinking critically. The apparent contradiction in the findings from surveys (in this study and other studies) and content analysis of students' responses to open-ended questions such as those in this study show that more comprehensive studies on cross-cultural learning approaches are needed before conclusive conceptions of Asian and East-Asian learners' learning attitudes and behavior can be drawn.

The results of this study suggest that the Malaysian ESL learners in this study, who belong to the category of South East Asian learners, do not demonstrate a desirable positive critical thinking and dispositions as evidenced in their CCTDI and CRCT scores, as well as their written responses to the open-ended comprehension questions in the latter. The social environment, education system and sociocultural influences may have contributed to such behavioral patterns observed in the students of the study. It is important to mention here that the findings do not suggest that teaching critical thinking is not relevant and suitable for Malaysian students although cultural traditions seemingly do not encourage such skills as proposed by some researchers (Abdullah, 1996; Atkinson, 1997; Liu, 1998). On the contrary, the findings underscore the need to promote critical thinking and reading among Malaysian university students in order to make them more aware of the need to engage in critical reading and thinking skills when reading. Further research is also needed to study the contribution of critical thinking dispositions in producing better critical readers among Malaysian students. Reading does not only involve higher order cognitive skills but also good thinking habits which will enhance and motivate readers to adopt critical reading habits in their everyday reading practices. There are some aspects of good thinking habits that need to be highlighted such as being analytical, openminded, inquisitive and being disposed to seeking the truth so that students are aware of the connection between readers' and writers' relationship in text

production, which in turn, enhances the need to exercise the critical spirit in their reading practices.

Similarly, the role of the teachers in developing critical reading among students should also be given due consideration as they are the ones who are responsible for providing explicit training for the students on how to think and read critically particularly in the manner in which they pose relevant critical comprehension questions in the reading classroom. In essence, this study shows that students need to be trained not only to acquire thinking skills but also the dispositions to think critically in order to be an active reader, which eventually empower them to take control of their own learning.

References

- Abdullah, A. (1996). *Going glocal. Cultural dimensions in Malaysian management*. Kuala Lumpur: Malaysian Institute of Management.
- Albro, E. R., Doolittle, E. J., Lauer, K. & Okagaki, L. (2009). Reading with understanding: Research from the Institute of Educational Science. *Perspectives on Language and Literacy*, 35(2), 17-21.
- Applegate, M. D., Quinn, K. B. & Applegate, A. J. (2002). Levels of thinking required by comprehension questions in informal reading inventories. *The Reading Teacher*, 56(2), 174-180.
- Atkinson, D. (1997). A critical approach to critical thinking in TESOL. *TESOL Quarterly*, 31(1), 71-94.
- Bartu, H. (2001). Can't I read without thinking? *Reading in a Foreign Language*, 13(2), 593-611.
- Brantmeier, C. (2003). Beyond linguistic knowledge: Individual differences in second language reading. *Foreign Language Annals*, 36(1), 33-43.
- Cook-Gumperz, J. (1986). Introduction: The social construction of literacy. In C. Cook-Gumperz (Ed.), *The social construction of literacy*. Cambridge: Cambridge University Press.
- Crismore, A. (2000). *Helping ESL and EFL university students read critically: A 2000's challenge*. ERIC ED, 450-592.
- Douglas, N. L. (2000). Enemies of critical thinking: Lessons from social psychology research. *Reading Psychology*, 21(2), 129-144.
- Ennis, R. H. (1985). A logical basic for measuring critical thinking skills. *Educational Leadership*, 44-48.

- Ennis, R. H. (1987). A taxonomy of critical thinking dispositions and abilities. In J. B. Baron & R. S. Sternberg (Eds.), *Teaching thinking skills: Theory and practice* (pp. 9-26). New York: W. H. Freeman.
- Facione, P. A. & Facione, C. A. (1992). *The California Critical Thinking Disposition Inventory (CCTDI). Test administration manual*. CA: California Academic Press.
- Facione, N. C. & Facione, P. A. (2010). *CCTDI Test Manual*. Millbrea CA: The California Academic Press.
- Facione, P. A., Facione, N. C. & Giancarlo, C. A. F. (2000). The disposition toward critical thinking: Its character, measurement and relationship to critical thinking skills. *Informal Logic*, 20(1), 61-84.
- Fisher, R. (2001). Philosophy in primary schools: Fostering thinking skills and literacy. *Reading Literacy and Language*, 35(2), 67-73.
- Flynn, L. L. (1989). Developing critical reading skills through cooperative problem solving. *The Reading Teacher*, 42(9), 664-668.
- Gan, Z. (2009). Asian learners' re-examined: An empirical study of language learning attitudes, strategies and motivation among mainland Chinese and Hong Kong students. *Journal of Multilingual and Multicultural Development*, 30(1), 41-58.
- Gee, J. P. (2001). Reading as situated language: A sociocognitive perspective. *Journal of Adolescent & Adult Literacy*, 44(8), 714-725.
- Giancarlo, C. A. & Facione, P. A. (2001). A look across four years at the dispositions toward critical thinking among undergraduate students. *The Journal of General Education*, 50(1), 29-55.
- Glaser, R. (1984). Education and thinking: The role of knowledge. *American Psychologist*, 39(2), 93-104.
- Grabe, W. (1995). Dilemmas for the development of second language reading abilities. *Prospect*, 10(2), 39-51.
- Hennings, D. G. (1999). *Reading with meaning* (4th Ed.). New Jersey: Prentice Hall.
- Hussin, H. (2006). Dimensions of questioning: A qualitative study of current classrooms practice in Malaysia. *TESL-EJ*, 10(2), 1-23.
- Kern, R. (2000). *Literacy and language teaching*. Oxford: Oxford University Press.
- Koo, Y. L. (2003). Socioculturally-oriented critical reading in the learning space: Empowering multicultural/lingual voices. In A. Pandian, G. Chakravarthy & P. Kell (Eds.), *New literacies, new practices, new times* (pp.128-155). Selangor: Universiti Putra Malaysia Press.

- Koo, Y. L. (2008). *Language, culture and literacy: Meaning-making in global contexts*. Bangi, Selangor: Universiti Kebangsaan Malaysia.
- Koo, Y. L. (2011). Sustaining critical literacy in higher education: Ambivalence, challenges and tensions. In A. Pandian, S. A. Malik, Mohamed Ismail & C. H. Toh (Eds.), *Forging unity amidst diversity: From classrooms and beyond* (pp. 104-112). Penang: School of Languages, Literacies and Translation, USM.
- Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into practice*, 41(4), 212-218.
- Kumaravadivelu, B. (2003). Problematizing cultural stereotypes in TESOL. *TESOL Quarterly*, 37(4), 709-719.
- Larger, J. A. (1987). A sociocognitive perspective on literacy. In J. A. Larger (Ed.), *Language, literacy, and culture: Issues of society and schooling*. New Jersey: Ablex Publishing Corporation.
- Larger, J. A., Bartolome, L., Vasque, O. & Lucas, T. (1990). Meaning construction in school literacy tasks: A study of bilingual students. *American Educational Research Journal*, 27(3), 427-471.
- Lipman, M. (1988). Critical thinking – What can it be? *Educational Leadership*, 46(1), 38-43.
- Littlewood, W. (1999). Defining and developing autonomy in East Asian contexts. *Applied Linguistics*, 20(1), 71-94.
- Littlewood, W. (2000). Do Asian students really want to listen and obey? *ELT Journal*, 54(1), 31-36.
- Liu, D. (1998). Ethnocentrism in TESOL: Teacher education and the neglected needs of international TESOL students. *ELT Journal*, 52(1), 3-10.
- McLaughlin, M. & DeVogd, G. (2004). Critical literacy as comprehension: Expanding reader response. *Journal of Adolescent & Adult Literacy*, 48(1), 52-62.
- Mohd. Sidek, H. (2011). Methods of EFL secondary reading instructions. *International Journal of Humanities and Social Science*, 1(3), 181-191.
- Nambiar, R. M. K. (2007). Enhancing academic literacy among tertiary learners: A Malaysian experience. *3L Journal of Language Teaching, Linguistic and Literature*, 13, 77-94.
- Pandian, A. (2007). Literacy skills in higher education: A comparative study between public and private university students. In S. Kaur, M. Sirat & N. Azman (Eds.), *Globalisation and internationalization of higher education in Malaysia*. Penang: University of Science Malaysia (USM) Press.

- Pardo, L. S. (2004). What every teacher needs to know about comprehension. *Reading Teacher*, 58(3), 273-280.
- Paul, R. (1990). *Critical thinking*. Rohnert Park, CA: Center for Critical Thinking and Moral Critique, Sonoma State University.
- Perkins, D. N., Jay, E. & Tishman, S. (1993). Beyond abilities: A dispositional theory of thinking. *Merrill-Palmer Quarterly*, 39(1), 1-21.
- Pithers, R. T. & Soden, R. (2000). Critical thinking in education: A review. *Educational Research*, 42(3), 237-249.
- Quick, T., Zimmer, M. & Hocevar, D. (2011). *Making reading relevant. The art of connecting* (2nd Ed.). Prentice Hall.
- Ramanathan, V. & Kaplan, R. B. (1996). Audience and voice in current composition texts: Some implications for ESL student writer. *Journal of Second Language Writing*, 5(1), 21-34.
- Robertson, M., Line, M., Jones, S. & Thomas, S. (2000). International students, learning environments and perceptions: A case study using the Delphi technique. *Higher Education Research & Development*, 19(1), 89-102.
- Ruddell, R. B. & Unrau, N. J. (2004). Reading as a meaning-construction process: The reader, the text and the teacher. In R. B. Ruddell & N. J. Unrau (Eds.), *Theoretical models and processes of reading* (5th Ed.). Newark: International Reading Association, Inc.
- Schommer-Aikins, M. & Easter, M. (2008). Epistemological beliefs' contribution to study strategies of Asian Americans and European American. *Journal of Educational Psychology*, 100(4), 920-929.
- Sears, A. & Parson, J. (1991). Towards critical thinking as an ethic. *Theory and Research in Social Education*, 19, 45-68.
- Smith, F. (1992). *To think in language, learning & education*. London: Routledge.
- Stapleton, P. (2002). Critical thinking in Japanese L2 writing: Rethinking tired constructs. *ELT Journal*, 56(3), 250-257.
- Stupnisky, R. H., Renaud, R. D., Daniels, L. M., Haynes, T. L. & Perry, R. P. (2008). The interrelationship of first-year college students' critical thinking disposition, perceived academic control, and academic achievement. *Research in Higher Education*, 49(6), 513-530.
- Thistlewaite, L. (1990). Critical reading for at-risk students. *Journal of Reading*, 33(8), 586-593.
- Vygotsky, L. S. (1978). *Mind in society*. Cambridge, MA: Cambridge University Press.

- Wallace, C. (2003). *Critical reading in language education*. New York: Palgrave.
- Wong, B. E. & Kumar, V. M. (2009). Constructing meaning in a bilingual learning environment: Two primary classrooms in Malaysia. In R. Barnard & M. E. Torres-Guzmán (Eds.), *Creating classroom communities of learning* (pp. 127-145). Bristol: Multilingual Matters.
- Yeh, M. & Chen, H. (2003). Comparison of affective dispositions toward critical thinking across Chinese and American baccalaureate nursing students. *Journal of Nursing Research*, *11*(1), 39-45.
- Worden, T. W. (1981). Critical reading: Can the skills be measured? *Reading Improvement*, *18*(4), 278-286.

The Influence of Previous Education on College Freshmen's English Descriptive Writing in Taiwan

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Abstract

This study examines the influence of previous education on Taiwanese college freshmen's English descriptive writing as description appears to be a neglected essay genre by many college writing instructors and researchers. The purpose is to help college writing instructors work on genre practices meeting their students' needs through knowing how they are affected intellectually and academically by previously-engaged educational systems, policies, and pedagogical constructs. Qualitative data were collected and analyzed using interviews with and writing samples by nineteen college freshmen of one English composition class at a private university in Taiwan. Etienne Wenger's concept of participation-reification in Community of Practices and H. C. Brashers's features of descriptive style were employed as theoretical frameworks. The results show the great textual influence of previous education on the participants' descriptive writing practice, implying that the reification prevailed over participation in their high school English writing practices. The highlight of English narrative writing in Taiwan's college entrance exams has substantiated a clear form of reification to affect its high school English teachers' writing curriculum and instruction. The influence was divided into the features of pronunciation, vocabulary, grammar, and organization for

in-depth discussion. The article concludes the significance of teaching descriptive writing to college students as a specific genre and the fundamental role of description in their practice of other writing.

Keywords: genre analysis, college writing, descriptive writing, case study

Introduction

Background of the Study

Among English essay genres practiced by college students, description appears to be a neglected one as little literature seems to be devoted to this line. In searching literature of Taiwanese databases (e.g., THCI and TSSCI) and English databases (e.g., ERIC, Education Research Complete, and Google Scholar), college students' descriptive writing, particularly the group of Non Native English Speaking (NNES) backgrounds, tends to be a less studied topic. One possible guess is that some college writing instructors may not treat description as highly academic a genre as would be necessary in college English writing curriculum. Less attention to descriptive writing instruction eventually limits the students' descriptive writing performance. Description is indeed an important genre, for it often serves as the basis for the writing of other genres (Hauck, 1969). Spitzer (2012) even considered a written piece of weak descriptive qualities to be unqualified for a literary work. Hauck's and Spitzer's claims validate the purpose of the study that a fuller understanding of college students' descriptive writing practice is necessary. The fact that college students' descriptive writing tends to be overlooked by researchers/instructors also paves the way for a need of knowing the ways their descriptive writing is practiced and affected.

Among factors affecting NNES college students' English writing, Dong (1998) pointed that the influence of previous education is a less studied one, if compared with other affected factors such as the writers' limited English proficiency, novice writing status, L1 influence, or other sociocultural influences (Crandall, 1993; Hall, 2001; Nowalk, 2010). A fuller understanding of the ways college freshmen are affected intellectually and academically by their previously-engaged educational systems, policies, and pedagogical constructs allows college writing instructors to work on genre practices meeting the needs of this group. Hence this study investigates the influence of previous education on nineteen Taiwanese college freshmen's English descriptive writing.

Though less research efforts seem to be devoted to college students' descriptive writing, a distinction still exists between the group of Native English Speaking (NES) and that of

NNES. Compared with NNES college students, NES college students start their descriptive writing practices in a much younger age, usually in the elementary or the secondary education (Bayer, 1990; Black, 1993; Diliberto & Algozzine, 2004; Holliway, 2004; Johannessen, 1995; Smith, 2000), implying that topics revolving around NES college students' descriptive writing may not be appealing to researchers. Nonetheless, many NNES writers are faced with another situation: they are rarely taught English essay genres specifically (Van Gilst & Villalobos, 1996), let alone practice the description as a specific one. Take Taiwan for example. Chang's (2008) survey on ninety-six Taiwanese college freshmen reported that Taiwanese high school students received either no English composition instruction or only very little narrative and/or descriptive writing practices. Their high school English teachers paid little attention to their English composition instruction even if English composition was a requisite part of Taiwan's joint college entrance exam. Under such circumstances, should Taiwan's college writing instructors ignore their students' insufficient practice of descriptive writing and highlight the teaching of other genres? If that is done, Taiwanese college students may fail to produce quality descriptive writing leading to literary production. This dilemma indicates the significance of the present study.

To analyze the influence of previous education on participating students' writing, the present study employs Etienne Wenger's (2002) "community of practices" as theoretical framework, within which the concept of "participation-reification" (Wenger, 2002) is highlighted. The community of practices is largely employed by researchers (Flowerdew, 2000; Li, 2006) for underpinning the theoretical justification of academic novices' "process of scholarly apprenticeship" (Flowerdew, 2000, p. 129) as it investigates not only their "doing, taking, thinking, feeling, and belonging" (Wenger, 2002, p. 56) as "participation" but also their ways to objectify the participation as "reification" (Wenger, 2002, p. 59). Given varied pedagogical constructs and objectives between Taiwan's high school education and college education, the study treats the research participants' English writing practices in high school and college as separate communities of practices and re-conceptualizes participation-reification for an illustration of the influence of previous education on their later writing practices.

The next section provides a discussion of the following subthemes: descriptive writing practices in NES/NNES tertiary contexts; the fundamental nature of descriptive writing. A theoretical justification of the use of Etienne Wenger's "community of practice" is also provided. Although the study emphasizes the case of Taiwan, the review of relevant literature goes beyond the context of Taiwan due to a lack of relevant literature centering it. An

extensive review beyond Taiwan context also gives readers a glimpse of the status quo of descriptive writing practices in college writing curriculum.

Research Questions

The present study addresses the following questions:

First, what participation-reification can be found on the research participants' high school English writing practices?

Second, how does their past participation-reification affect their practice of descriptive writing in the new community of practice (i.e., college study)?

Third, how do the findings shed light on Taiwan's college English writing curriculum?

Literature Review

Descriptive Writing Practices in NES/NNES Tertiary Contexts

Writing courses offered to NNES college students in NES academic contexts vary greatly from the ones offered to NES students due to different “theoretical constructs and pedagogical goals” (Baker, 2008, p. 140) and “academic-culture foundations” (Atkinson & Ramanathan, 1995, p. 561). Generally, in writing courses offered specifically to NNES undergraduate students, writing is often managed as a transitional activity to prepare students to be academically literate or culturally adaptive (Galvan & Kamhi-Stein, 1995; Schlumberger & Clymer, 1989; Villarreal, 1990). As a result, teaching description specifically as a genre tends to be neglected. Atkinson & Ramanathan (1995) explained that a “deductively-organized” form of academic essays (p. 559) as well as other similar writing tasks such as “note-taking, summarizing, and paraphrasing” (p. 552) that train NNES students to be “technicians of writing” (p. 560) for immediate use in their college learning are often the highlight of writing curriculum. The following two examples show such situation.

In one case (Rorschach, Tillyer & Verdi, 1992), City College in New York, America designed an experimental writing program for its beginning-level ESL undergraduates by employing a whole language approach, in which the instruction deemphasized the teaching of genres. The students were immersed in free-writing, learning logs, and producing a 50-page-long autobiographical novel as their post-reading activity instead. The school believed that having the students immersed in personal lived experiences as writing backgrounds enables them to develop interest in dealing with varied forms of writing tasks. Similarly, in the composition program for “academically underprepared” NNES college students in The Commanding English Program at the University of Minnesota, America, the

instructional objective was also placed on reinforcing the students' academic literacy through the following instruction: (1) using personal narrative writing to heighten their learning interest; (2) making reading-writing connection as a transition for their preparation for academic discourse use; (3) having them engaged in research-based writing activities for academic literacy development (Bosher, 1992).

In brief, equipping NNES students with some academic literacy for their immediate use in research-oriented college assignments is the primary concern for many college writing programs in NES tertiary contexts. As for having them practice description as the basis leading to other forms of college writing or literary production, it does not seem to be included in the plan.

With respect to college writing instruction in NNES contexts, the situation is also similar in which descriptive writing also tends to be deemphasized. The fact that NNES college students are unfamiliar with and struggle with the use of English academic discourse also causes a number of writing instructors to place major concern on developing the students' academic literacy, aimed for meeting "the writing demands from various content courses" (Hu, 2007, p. 69). Hu (2007) examined the writing tasks received by Chinese students and found that they received "little simple functional and expressive writing tasks such as writing a short letter, describing a place, and narrating a personal experience" (p. 69). He considered these prior writing practices contribute little to college students' academic discourse use. In another example, Yan (2010) also reported that English writing instruction in Chinese universities highlights the teaching of "accuracy of form" instead of "meaning-making" or "meaningful contexts" (p. 30). Caused by the utilitarian aim of college writing curriculum, the overemphasis of students' practices of grammar accuracy or research-oriented writing in the instruction to some extent discourages the writing instructors from teaching description to college students as a genre.

The Fundamental Nature of Description

Although description tends to be treated not as highly academic a genre as would be necessary in college writing instruction, it is in fact a fundamental genre largely incorporated by us in writing. Its pragmatic nature can be seen in the following quote:

"Nearly every essay, after all, calls for some kind of description; for example, in the student comparison/contrast essay the writer describes two kinds of stores; in the professional process essays the writer describes the embalming procedure in great detail." (Wyrick, 2011, p. 323).

Many writers have got accustomed to incorporating description in other forms of writing so that they rarely see it as a distinctive one deserving to be taught specifically as a genre in college writing curriculum. As a matter of fact, descriptive writing contains following features: (1) it is creative; (2) it reinforces the writer's use of basic writing tools such as "good vocabulary, precise diction, and sound organization" (Hauck, 1969, p. 7); (3) it evokes the writer's thinking. In brief, it is a basis for the teaching of other types of writing (Hauck, 1969, p. 1).

Although descriptive writing is often considered a basis, many students are challenged with writing "specific" and "concrete" description, a core component for describing sensory qualities of the subject (Stancil, 1973, p. 8). To write descriptively requires one's description of a subject's physical, intellectual and emotional qualities (Bryant, 1980) and yet such quality level can only be attained through sensitive observation and one's ability to vary the use of sensory details and figurative language (Johannessen, 1995). Descriptive writing is not merely reporting what the subject is but a revelation of the writer's perception of the subject (Manery, 2003).

Community of Practice

In Wenger's (2002) community of practice, a community of practice consists of the domain, the community, and the practice. People sharing the same domain of interest form the community and the membership even if their domain of interest seems absurd or untraditional to outsiders of the community. The members, practitioners in the community of practice, pursue shared domain of interest. They collaboratively participate in "joint activities" for "a shared practice." Participating students in this study were taught to pass the college entrance exam as their main study objective in high school study, that is, their previous community of practices. Thus they were "practitioners" of a "shared repertoire" even though they came from different geographical regions or socioeconomic backgrounds, attended different high schools, and were taught by different teachers. They took the same college entrance exam, met the same admission threshold, and got engaged in the next community of practices (i.e., college education) at the same time. By emphasizing participation-reification, this study looks specifically at their "acting, taking, thinking, feeling, and belonging" (Wenger, 2002, p. 56) in separate communities of practices and their ways to objectify the participation in these communities of practices as "reification." Given the socially-relevant nature of school writing practices, their participation in varied writing practices and the texts they produced as a form of reification show the influence of previous participation-reification on the new one.

Methods

Participants

This study follows a case study approach (Yin, 1981) by selecting “particular subjects... to facilitate the expansion of the developing theory” (Bogdan & Biklen, 2006, p. 73). The data collection procedure began with the search of college freshmen engaged in their first English descriptive writing practice: the research participants were 19 Taiwanese English major freshmen studying in one private university in Taiwan and attending the same freshmen composition class. They were informed about the nature and the scope of the study prior to participating in it and they agreed to participate voluntarily in it. To ensure the protection of their private information, their names are not disclosed. The researcher created an alphabetical code for each of them: they were named Student A, B, C, D, etc. in the study. The students, with average age of 18, were from different geographical regions of Taiwan and graduated from different high schools (some attended public high schools and some private ones). They got admitted to the current program through one of the following channels: either by taking the joint college entrance exam or by taking the admission exam administered by their currently-enrolled program.

Description was the first written genre taught in their college English composition class, in which they practiced the description of a spatial place. The course instructor followed the course plan and used the textbook decided by the Freshmen Composition curriculum committee. Generally speaking, instructors teaching this course formed a curriculum committee; they nominated a course coordinator, decided the course plan and the textbook, and followed the course schedule provided by the coordinator. During the course of study, they used Smalley, Ruetten and Kozyrev’s (2000) book, *Refining Composition Skills: Rhetoric and Grammar*, as the required textbook. As a two-semester-long course, the students learned English paragraph writing in the first semester and essay writing in the second semester. Although description was taught, it was taught only in the first semester, meaning that the students had no chance to practice writing a descriptive essay and that their descriptive writing experience would be limited to the writing of a descriptive paragraph. In their second semester learning, expository essay writing was the highlight as the course coordinator held that exposition was more academically-relevant. Based on the textbook used by the observed class, two types of descriptive writing were taught: describing a spatial place and describing a person. Although both types were taught, the students practiced only one (i.e., describing a place) as limited time frame was allocated for the teaching of descriptive writing.

Based on the course syllabus, the teaching of descriptive writing was scheduled to be finished in six hours.

Data Collection

The study was conducted from September 2010 to December 2010. The researcher collected the following sources of data from the research participants: first, a collection of their descriptive writing pieces; second, audio-taped one-on-one semi-structured interviews about their high school English writing practices and development of descriptive writing strategies. All the data were naturalistic in their nature as the purpose of this study was to know through the textual analysis of the participants' writing, how their previous writing education in high school study influenced their later practice of a new genre in college study. Therefore, there was no manipulation of variables or hypotheses in this study. Thanks to the qualitative nature of this study, interviews were conducted as an "auxiliary method" (Kvale, 1996, p. 98) to make sense of the collected writing data. By interviewing them about their rhetorical constructions and writing purposes, the researcher gathered "empirical information" (Kvale, 1996, p. 98) of their participation and reification in both previous and current communities of practices.

The collected writing data, nineteen pieces in total, were the participants' descriptive paragraph writing assignments. The students were asked by the instructor to compose one single paragraph about their composition classroom as the homework. Each of them drafted, submitted his/her piece to the instructor, and received written feedback and grade from the instructor. Then the researcher collected their pieces. Regarding the interviews, each participant was interviewed twice, namely thirty-eight interviews being conducted totally. The first interview was conducted in the first week of class, with focus on their high school English writing experiences. Questions asked include their high school teachers' English composition instruction, their preferred writing topics, ways of improving English composition skills, a comparison of their Chinese writing with English writing, and their definition of good English writing. The second interview was conducted after the researcher collected and read their pieces. It was also conducted individually, with emphasis on their development of writing plans and rhetorical strategies. Since their rhetorical constructions and writing quality varied, the interview questions also varied from person to person. Generally, the researcher pointed to every participant how and why certain words, specific details, and/or sensory images were used in his/her draft and whether he/she was conscious of his/her writing purposes.

All data was collected in English, with the interview data being recorded and transcribed verbatim. Although the researcher and the participants did not speak English as their first language, the researcher followed the English-corner-policy¹ required by the participants' enrolled program to interview them in English language. To better understand Taiwanese college students' previous participation-reification in high school learning, the researcher also interviewed one public high school English teacher, who was a Taiwanese local speaking and teaching English as a foreign language. She had more than ten years teaching experiences in Taiwan's high schools and was familiar with the trends of English composition exams in Taiwan's joint college entrance exams. Questions asked revolved around the ways English composition was taught in Taiwan's high schools and the types of composition prompts preferred in Taiwan's college entrance exams. The interview answers gained from this informant enabled the data to be triangulated.

Data Analysis

All data was analyzed qualitatively by following the procedures of constant comparison (Miles & Huberman, 1994). In analyzing their written pieces, this study employed Brashers' (1968) model on *Teaching Descriptive Style*. Based on Brashers, there are two types of description: static description and process description. In the static description, a scene is only a spatial place in the story; in the process description, a scene "participates in the telling" (Brashers, 1968, p. 12). In the present study, the research participants' descriptive writing falls under the category of static description since they only learned to describe a place spatially with the use of sensory details and figurative language as main rhetorical strategies.

Brashers classified descriptive writing style into five features: (1) features of pronunciation, (2) features of vocabulary, (3) features of grammar, (4) features of organization, and (5) patterns of aesthetic heightening. The first three are local features; the latter two are global features. According to Brashers, local features play a primary role in novice writers' descriptive writing (p. 7); global features affect readers conceptually instead. This study examines the first four features. The last feature (i.e., patterns of aesthetic heightening) is not discussed in this study due to following reasons: first, the research participants only wrote one single paragraph, which is not detailed enough to discover their aesthetic patterns; second, they were novice in English writing, meaning that they had limited understanding about writing for aesthetic purposes.

Results

The results are divided into two parts in response to the first two research questions. Regarding the first research question about the participants' participation-reification in high school English writing practices, the result drawn on the interview data shows that reification prevailed over participation in these students' high school English writing practices. Such participation-reification can be reflected on the school's instructional emphases on grammar correction, text memorization, and personal narrative writing.

Next, regarding the second question about the ways their past participation-reification affects their practice of descriptive writing in the new community of practice (i.e., college study), the result through the analysis of their collected writing samples shows the great textual influence caused by previous education they received in high schools. The writing analysis follows H. C. Brashers' framework by dividing the students' descriptive writing styles into features of organization, features of pronunciation, features of vocabulary, and features of grammar.

Participation-Reification in High School English Writing Practices

In their high school study, these research participants participated minimally in English writing practices, even if they knew that they would be tested English composition in the college entrance exam. Regardless of which high schools they attended, their English composition was taught in relatively similar ways in which the primary concern was on grammar correction and sentence memorization. They hardly had official English composition class and were taught the use of personal narrative writing as the main rhetorical strategy. Thanks to these, they had no knowledge of English written genres; for example, they could not distinguish description from narration. Overall, reification seemed to prevail over participation in their high school English writing practices.

Grammar correction. Their writing instruction mainly consisted of teacher - demonstration of student writing errors yet the so-called writing errors were mainly their grammatical errors. In other words, what is reified is the grammar instruction. The students had little participation in genre practices. Some of their high school English teachers corrected their writing yet some did not. For example, Student E said that "my high school English teacher seldom corrected our essays. She usually asked us to exchange our pieces with each other for peer correction of grammatical errors." The writing errors, regardless of being corrected by the teacher or the peer, were grammatical errors per se.

Text memorization. In addition to grammar instruction, many of their teachers also liked to have them memorize good writing models. This cut down their needed participation opportunities in actual practice of writing processes. In their writing processes, their brainstorming was replaced with memorized prior texts; their drafting was mainly to produce artifacts; their revising was limited to mechanical change instead of content change. What they were asked to memorize ranged from words of wisdom, phrases, and sentences to the whole paragraph. For a larger scale of memorization, one example can be found on Student F, whose high school English teacher selected a sample essay piece, wrote it on the blackboard, and asked the students to scribe it into their notebooks for memorization. For a smaller scale of memorization, the example can be found on Student T, whose teacher selected some “good sentence models” out of sample essays and told them that those were “good sentences” or “beautiful sentences” that deserved them to memorize for the use in the college composition exam. An elaboration of unique ideas was not appreciated. Technically speaking, they composed by plagiarizing other good writers’ prior texts.

Personal narrative writing. The aforementioned influenced their writing behaviors: they were in favor of personal narrative writing. Due to little participation in meaning-making, all the students preferred writing topics revolving around personal lived experiences. They liked to draft stories about their family, friends, hometown, trip, unforgettable memories, etc. Take Student H as an instance, writing such kind of topics made her “feel safe” since she was “writing something familiar” instead of experimenting with something new.

Such topics were also found to be manageable for a timed writing activity as they required little brainstorming. As Student K said, such topics enabled her to “narrate directly what I had gone through.” Student Q pointed that personal narrative writing was time-saving because “I do not have to think a lot since it is a real thing that happened to me. I just combine all the things that happened to me for narrating.” Although writing of this type also allowed the use of descriptive writing skills, they often failed to do it as they were not taught any descriptive writing. Personal narrative writing was the only type of writing they could manage.

In brief, in view of these students’ high school English writing practices, we learnt that their high school English teachers reduced their needed participation opportunities in actual practice of writing by showing them directly the reified product (i.e., good writing models) and having them memorize/mimic it.

An Analysis of Descriptive Writing

Participating students' descriptive writing reflected a strong textual influence of their previous education. In the following analysis, their features of organization are discussed at first, followed by local features of pronunciation, vocabulary, and grammar. By presenting the global feature at first (i.e., the features of organization), readers can build a general understanding of their idea organization.

Features of organization. Brashers (1968) stated that the features of organization refer to the writer's paragraph organization, which "cannot be seen in the texture of the individual sentence, but persist conceptually in our memories as contributors to the tone, mood, and intent of a piece of writing" (p. 5). Research participants showed the tendency to use the first person voice in their writing: eleven out of nineteen students developed the topic into personal narrative paragraph; one into expository paragraph; seven into descriptive paragraph.

Among eleven personal narrative writers, nine wrote about why or how they liked or disliked their classroom personally. For the remaining two, one wrote how lucky she was to be a college student; the other compared her high school classroom with current one and how the current one reminded her present college student status. For the only one expository paragraph writer, she wrote with a third person voice by stating why some students might like their composition classroom and some others might not.

The following two examples excerpted from Student F and Student N show such personal narrative style in descriptive writing. Based on the interview data, both developed their writing plan by adhering to "how I feel about this room."

Excerpt 1

The college life in this university is indeed a fresh experience to me in my life. In fact, when it comes to the difference between now and the past, I'd like to say that I was a little bit astonished when seeing the classrooms in this university. ...I thought there would be larger spaces in classrooms of college. ... However, the negative thoughts flew away as soon as I adjusted myself to my college life. Now, what I think is that the classroom is suitable for us. By sitting so close to one another, we can discuss mutually more easily. (excerpted from Student F's piece)

Excerpt 2

The first time I entered this room with beating heart, I found that I could calm down soon and enjoy the learning opportunity. During the class, I can see my classmates take notes, raise head, suddenly discuss with their neighbors and so forth. I have a fabulous learning space! See through the window, I have my gaze at the green tree, I hope after the full four year, I can become a qualified person in the future and feel fulfilled. (excerpted from Student N's piece)

According to the high school English teacher informant, Taiwanese high schools rarely offer English writing instruction on a regular basis, namely that it is not the core of Taiwan's high school English curriculum. However, since the students are faced with the need of composing an English essay in the joint college entrance exam, some high school English teachers teach their students to prepare for it by composing any given topics into personal narratives. In viewing Taiwan college entrance exam's English composition topics in recent ten years (from 2003-2013), a wide variety of topics and genres were covered (detailed prompts are listed in the appendix). The topics range from "immediate ones" that are directly related to high school students' daily lives to "remote ones" requiring their creativity use in an imagined situation. The genres were not limited to any specific one. Instead, narration, description, and exposition can all be interwoven in the writing. Nonetheless, these prompts share in common that (1) they asked the exam takers to compose a two-paragraph essay with the length of approximately 120-150 words; (2) they followed a guided writing procedure asking the writer to provide restrictive information in each paragraph. Taiwan high school English teachers thus developed a one-for-all writing instruction to train their students to deal with all kinds of composition topics: having "the self" present in the context as the persona. They took it for granted that when the author appears as the persona, he/she can easily develop a given topic into a personal story and finish writing in time, no matter the story is real or not.

For the remaining seven students developing their pieces into description, five managed them into an "undifferentiated collection of points" style (Tickoo, 2001, p. 32). The following excerpt shows such style:

Excerpt 3

There are 61 chairs inside including teacher's chairs. Also, there are 5 windows in the both side. In the up-front side of this classroom, there are 2 televisions. Near the television also have 2 speakers hung up there. In front of this class there are also have 4 trash cans which always waiting a student to give "the important things" to them. (excerpted from Student R's piece)

According to Student R, such a descriptive writing style was caused by her lack of descriptive genre practice. She said, "I had no idea how to write descriptively, so I decided to write down what I see such as the number and the accurate location of these facilities." A simple enumeration of details became her main descriptive writing strategy.

The remaining two built metaphorical images: one compared the classroom to the prison; the other compared the classroom to the monster. The excerpts below provide a contour of these two students' metaphorical images.

Excerpt 4

This room provides the feelings of prisoning. When I sit on the chair, I feel there is an invisible chain surrounded tightly like a python. So tightly that even though I can still see, touch, and listen, I can hardly breathe. I am like a little grounded rat, carefully obeying my master's orders, yet is still wanting to embrace freedom, the free of both body and soul. (excerpted from Student P's piece)

According to Student P, her use of metaphorical image as well as specific details was affected by her novel reading experience:

I want to compose a vivid descriptive piece because I was personally impressed a lot by J.K. Rowling's writing style in Harry Potter series. I read all the series in English and was amazed at J.K. Rowling's vivid description of scenes, characters, action, and plots. I hope to be a writer like her. This has driven me to create a prison image in my writing.

Contrary to Student P, Student C (whose excerpt is shown below) was unaware of his use of metaphorical image in writing:

I write by following what I think in my mind. I do not know any special rhetorical strategies. I compare the classroom to the monster just because I do not like to go to school and class; for me, going to class is like going to a monster place. It is my intuition and I state it directly.

Excerpt 5

The classroom is a monster, waiting for students come. ...Such a horrible door! Almost students are afraid of entering the door. If someone get into there, perhaps he couldn't go out again. Just like as a mouth there and we are a symbol of delicious foods. But if we don't go into, we can't be digested. (excerpted from Student C's piece)

Features of pronunciation. Features of pronunciation refer to the writer's use of "audible elements of the language" (Brashers, 1968, p. 3), such as the use of dialogues or "respelling, exclamation marks, dashes, italics, pauses, hesitations for stylistic effect" (p. 4). Generally, participating students' use of pronunciation elements was limited to (1) the use of the first person voice and (2) the use of punctuation marks, particularly exclamation points.

Most of them (i.e., 17 out of 19) relied on the use of the first person voice in their writing. Such use brings to readers audible effect as if the writer is telling the readers his/her personal story. The following example shows such audible effect.

Excerpt 6

In this classroom, I can see many student tables and they are all the same. I look around and see the blackboard, windows, televisions as well.... Finally, I feel at ease here. (excerpted from Student D's piece)

Regarding the use of punctuation marks as pronunciation cues, four of them used the exclamation point to reinforce their author voice. The following is an example of such use.

Excerpt 7

Such a horrible door!

(Excerpted from Student C's piece)

Other than the use of exclamation points for audible effect, one student used ellipsis and two used quotation marks. Although these punctuation marks also generate varied degrees of audible quality, the writers were not aware of such rhetorical effect. The interview data show that they used ellipses and quotation marks mainly because they had difficulty to describe fully their ideas in English as English is not their native language. The following example shows such use.

Excerpt 8

We can do many things together such as studying, discussing, chatting

(excerpted from Student I).

Note that in the above example, the student writer used the ellipsis erroneously: She was unaware of the exact number of periods used for English ellipsis. Although the use of ellipsis can indicate other available classroom activities, this student said that she used ellipsis mainly because her limited English vocabulary prevented her from fully explaining the ideas in English. Similarly, this problem happened on other two quotation marks users. They were unaware of the audible effect that quotation marks could bring. As shown below, Student R quoted "the important things" in her description of the trash cans mainly because she had difficulty to elaborate further details to the description.

Excerpt 9

In front of this class there are also have 4 trash cans which always waiting a student to give "the important things" to them.

(excerpted from Student R's piece)

In spite of some students' unawareness of the audible qualities of punctuation marks use, one student showed her rhetorical awareness through the use of capitalization. In the following instance, Student B used the upper case letters (i.e., HERE) to imply the dry classroom atmosphere. She said, "I want to emphasize I cannot do anything else in the classroom except listening to the teacher's lecture."

Excerpt 10

Above all, I'm sitting HERE.

(excerpted from Student B's piece)

Features of vocabulary. Brashers' features of vocabulary mean the writer's wordings, including the use of figurative language, polysyllabic words, nouns, adjectives, etc. Among participating students' vocabulary use, 12 of them considered vocabulary use as a core element of vivid description. However, they admitted that their vocabulary use was limited by their English vocabulary knowledge. Among these 12 writers, two created sensory images with specific vocabulary use: one built visual and olfactory image; the other built visual and tactile image. The following examples were Student O's visual and olfactory vocabulary use.

Excerpt 11

A scent of originality ushered me in the classroom when the first time I had the composition class.

(Student O's creation of smelling image)

Excerpt 12

Everything in the room runs on the same system. The blackboard has been erased thoroughly. Each chair has been put into its right place and looks extremely in order bodily. Everything my eyes touch is articulate and has its own style.

(Student O's creation of visual image)

Student O considered her selective use of vocabulary influenced by reading J. K. Rowling's Harry Potter series. She said "I hoped to work on vivid sentences and sensory images like J. K. Rowling, so I was careful in choosing the nouns, verbs, adjectives, sentence patterns. I could feel some visual images clearly as if I were there when reading the words and sentences written by Rowling."

The following two examples are another student's creation of sensory images, in which she used "old" to build visual and tactile images.

Excerpt 13

When I first came in this classroom, and looked around every facility, I could infer that it is older than me. The desk in front of the classroom was a little destroyed. And some of the ceilings had stains.
(Student G's creation of visual image)

Excerpt 14

Finally, I sat down near the middle of the classroom, I touched the desk, it is smooth, but when I raise my hand, my fingers were covered slight dust.
(Student G's creation of touching image)

In addition to the above two's use of sensory details, several used figurative language for textual vitality; nonetheless, their figurative language was limited to the use of metaphor, simile, and personification: three used metaphor; two used simile; two used personification. The following example shows Student C's metaphor use. As stated earlier, Student C did not consider his rhetorical construction a conscious attempt but an unconscious one as "it is just an intuitive reflection of the thought" in his eyes.

Excerpt 15

The classroom is a monster, waiting for students come.
(excerpted from Student C's piece)

Similarly, Student B's personification use was also not a purposeful one (shown in Excerpt 16). According to her, her use of "singing" for the description of birds' twittering was mainly caused by her limited English vocabulary knowledge.

Excerpt 16

We can hear some birds is singing.
(excerpted from Student B's piece)

Features of grammar. Brashers' features of grammar refer to the writer's grammatical construction, including within-sentence level and between-sentence level construction. For within-sentence-level construction, it includes the arrangement of the order of subject, object, and verb or dependent/independent clause use; for between-sentence-level construction, it can be the writer's use of varied sentence structures such as declarative, interrogative, exclamatory, parallel, etc. Brashers addressed that a writer's use of varied grammatical devices brings readers varied degrees of textual vitality.

Since more than half of the research participants developed their writing into personal narratives, their use of declarative sentences was common. Nonetheless, their declarative sentences mainly consisted of plain narration, particularly containing many comma splice errors caused by their limited English proficiency. The following example shows such problem.

Excerpt 17

And the last thing I want to mention, it is the noise pollution, that's not much protect for the noise, the classroom next to us or across from us, we are too close with each other.

(excerpted from Student Q's piece)

There were also few using other grammatical constructions: three students made loose sentences; one made balanced sentences; one made periodic sentences; two made exclamatory sentences. Excerpt 18 is an example of one student's loose sentence, in which the main idea is presented in an independent clause at first and followed by some dependent unit(s).

Excerpt 18

It is an ordinary room, just as common as other ones in our department.

(excerpted from Student P's piece)

Excerpt 19 is an example of the student's balanced sentence, in which parallelism is used.

Excerpt 19

This room is big, but it's not really big. This room is small, but it's not really small.

(excerpted from Student K's piece)

Although Student K made parallel structures in some of her sentences, she said that "my purpose was to fill out more words to make my paragraph look longer. That way, my piece has more volume."

The following is the periodic sentence example, in which the main idea is stated in the end of the sentence.

Excerpt 20

Seeing all kinds of new things and listening to different kinds of animal sounds outside the classroom, I realize that I'm a college student now.

(excerpted from Student H's piece)

Similar to her other classmates, Student H was not conscious of her use of periodic sentence. She said, “I generally just describe directly how I feel and did not think about making any specific writing style intentionally.”

Among their limited grammatical construction, exclamatory construction was their most familiar one. In the example shown below, Student S used exclamation point to let her readers know her personal feelings toward the topic.

Excerpt 21

I can understand that because we have many homework everyday and make us so tired!
(excerpted from Student S’s piece)

Discussion

This part highlights the answer of the third research question, that is, how the findings shed light on Taiwan’s college English writing curriculum. Some prior studies are used to discuss the implicated meaning of the studied phenomena, allowing readers to connect the participants’ writing behavior to their need of descriptive writing practice.

By studying participating students’ past participation-reification in high school English writing practices, this study found that reification prevailed over participation in their previous education. The overemphasis of English narrative writing in Taiwan’s college entrance exams has substantiated a clear form of reification to affect its high school English teachers’ writing curriculum and instruction. Taiwanese students are not taught English written genres specifically in high school curriculum. Eventually, this results in their development of a one-for-all writing style, which is to use personal narrative writing to deal with all kinds of writing tasks. They had little participation opportunities to negotiate the recovery of “a coordinated, relevant, or generative meaning” (Wenger, 2002, p. 65) in high school English writing practices due to the exam pressure imposed on them. Their participation-reification in high school English writing practices was strayed from treating writing as a meaning-making activity, since their participation opportunity emphasized traditional grammar instruction, text memorization, and personal narrative writing.

Prior researchers had reported that traditional grammar instruction and text memorization tended to dominate writing instruction in Chinese-speaking elementary school contexts (McCarthy, Guo & Cummins, 2005). This study found that such an emphasis is still ubiquitous in Taiwan’s secondary school contexts. Although such form of participation may be treated by Taiwan’s high school English teachers as an efficient way to prepare prospective students to be academically literate in the use of English written discourses, its strong

intertextual influence weakens the students' perception of sensory experiences, which eventually affects their overall quality of writing.

Next, the research participants' descriptive writing strategies were relatively limited regardless of their construction of organizational, pronunciation, vocabulary, or grammatical features. This accords partially with Tickoo's findings (2001) that writers of this group are not yet proficient in using English (1) to express the novelty of ideas, (2) to describe their thinking processes linearly, (3) to elaborate "forceful possible expression" of a concept, and (4) to produce reader-oriented texts (p. 32). Their writing failed to appeal to readers with "dominant impression" (Wyrick, 2011, p. 324). Three reasons may account for this: limited English writing proficiency, insufficient genre practice, and the unawareness of writing purposes. Although some students claimed that they were aware of their rhetorical constructions, their purpose was not to create dominant impression but to make their texts lengthier (e.g., Student K's use of parallel structures to make her text lengthier). Moreover, their favored use of first person voice to some extent brought to readers the misconception that the writer was the main character in the context whereas the physical scene was the subsidiary. These limit their development of writing quality and show that they rarely treated their writing beyond its school assignment purpose, therefore whatever English topics or genres given was hardly a meaning-making activity for their sharing or communication of values, attitudes, and thoughts.

Given such attitude, it is not a surprise that a mismatch exists between their rhetorical constructions and writing purposes. From a pedagogical perspective, these students should learn that simple enumeration of details does not suffice readers (Brashers, 1968). Teaching them to understand their purpose of writing and how they achieve it with the use of specific rhetorical construction need to be highlighted in college writing curriculum as these help them communicate effectively with readers. In line with Canagarajah's (2006) advice, the participating students should develop awareness that "we don't write only to construct a rule-governed text. ...We write to achieve specific interests, represent our preferred values, and identities, and fulfill diverse needs" (p. 602).

The findings shed light on the significance of teaching descriptive writing in English-related programs in Taiwanese tertiary institution. In viewing their Freshmen Composition course's six-hour-long descriptive writing lessons and the poor descriptive writing quality they produced, the findings echo the author's earlier claim that description is hardly treated as highly academic a genre as would be necessary in college writing instruction. A reinforcement of related genre practice in the research participants' current community of

practices is necessary. College writing instructors, before blaming their students' poor writing proficiency, should endeavor to understand the writing instruction their students received in previous community of practices as this poses a great textual influence on their subsequent learning in the new community of practices. Hauck (1969) stated that "if the descriptive writer is attempting to involve his reader, he is conscious that the reader exists. This awareness can give him purpose and direction, a reason for writing" (p. 4). This study echoes Hauck's suggestion by addressing Taiwan college freshmen's need to learn to write descriptively for their readers, a first step to the improvement of their college writing quality.

Conclusion

Drawing on Dong's (1998) claim that previous education affects EFL students' English writing performance and yet it is a less studied research topic, this study investigates such influence on Taiwanese college freshmen's descriptive writing. The findings answer the three research questions and support the claim that previous education does pose great textual influence on the students' new genre practices in new community of practice. This study ultimately suggests the reinforcement of descriptive writing practice in Taiwan's college English writing curriculum, for description, compared with other genres, tends to be neglected in Taiwan's secondary and tertiary-level English writing curriculum.

As shown in the results section, when personal narrative is used by the students as a panacea to deal with all kinds of composition tasks, it weakens their other writing and complicates the instructor's teaching of other genres. Since many college writing programs adopt personal narrative writing to enhance novice writers' writing interest, this study suggests that college writing instructors teach personal narrative writing sparingly. College students' practice of descriptive writing should not be weakened or neglected in that description is not merely a fundamental genre but a significant one that the students use widely in their other college writing tasks.

As a case study research, the aim of this research is not on establishing the representativeness (Bogdan & Biklen, 2006) but on what we can learn from participating students' progression into academic discourse use. In other words, by means of studying one single context where its high school curriculum and student learning are largely affected by its specific educational culture, we learn how this poses great textual influence on its college students' practice of a new genre. Although the findings of this study may serve an indicative for those teaching students of similar educational system as this study posed, there are some limitations of this study. First, the researcher conducted the interviews in English, which is

neither the researcher's nor the participants' first language. Many participating students could only provide brief answers to the researcher's questions and failed to elaborate further explanation due to their limited English speaking proficiency. This eventually limits the researcher's use of interview data. The interviews could have been done in the native language of the participants to avoid such flaw in the future. Second, classroom observations were not conducted and included as part of the data in this study, which limit our understanding of their actual practice of writing in previous as well as new community of practices. A longitudinal observation of the participants' engagement in previous as well as new community of practices will be useful as we can know the implicated meaning of their rhetorical construction across the change of time, pedagogical constructs, and educational systems from the first-hand data. Third, there are also no teacher interviews being conducted and included as part of the data in this study. An inclusion of interview data with the participants' high school English teachers and college writing instructor shall benefit our understanding of their preferred use of certain rhetorical construction.

As shown, the specific instructional policy, curriculum design, pedagogical goals, and college admission threshold of each educational context pose varied degrees of influence on its students' writing performance. Future researchers interested in Asian EFL college freshmen's previous education as an affected factor of their writing performance may further explore the role of disciplinary variation in their development of rhetorical styles, since college freshmen are faced with a changed role in their writing process (i.e., from writing to pass the college entrance exam to writing for academic purposes in their fields of study). An inclusion of longitudinal observation such as classroom observation, interviews with both the participants and their instructors will be necessary for future research as this allows us to know the ways college freshmen's participation is situated, reification is formed, and discrepancy emerges across their prior/subsequent educational systems and rhetorical cultures.

Notes

¹ To help its students improve their English proficiency, the participants' enrolled program tried to create an English-speaking environment by encouraging and suggesting its faculties, students, and other related individuals to use English language as the medium of communication in the department. The researcher followed the policy by conducting English interviews with the participants.

References

- Atkinson, D. & Ramanathan, V. (1995). Cultures of writing: An ethnographic comparison of L1 and L2 university writing/language programs. *TESOL Quarterly*, 29(3), 539-568.
- Baker, B. A. (2008). L2 writing and L1 composition in English: Towards an alignment of effort. *McGill Journal of Education*, 43(2), 139-155.
- Bayer, R. A. (1990). *The effects of a first grader's participation in a writer's workshop on their ability to become more confident and more descriptive writers* (Master's thesis). Kean University, Union, New Jersey, USA.
- Black, J. (1993). *The effects of auditory and visual stimuli on tenth graders' descriptive Writing*. Riverside, CA, USA: University of California, Riverside. (ERIC No. ED364887)
- Bogdan, R. & Biklen, S. K. (2006). *Qualitative research for education: An introduction to theories and methods*. (5th ed.). Boston, MA: Allyn and Bacon.
- Bosher, S. (1992). *Developing a writing curriculum for academically underprepared college ESL students*. University of Minnesota, MN, USA. Retrieved from ERIC database. (ERIC No. ED352843).
- Brashers, H. C. (1968). Teaching descriptive style. *Journal of English Teaching Techniques*, 1(2), 1-12.
- Bryant, P. (1980, March). *Nature writing: Giving students writing a usable tradition*. Paper presented at the Annual Meeting of the Conference on College Composition and Communication. Washington, DC, USA.
- Canagarajah, A. S. (2006). Toward a writing pedagogy of shutting between languages: Learning from multilingual writers. *College English*, 68(6), 589-604.
- Chang, W. (2008). *An investigation of Taiwanese university students' prior Chinese and English writing experiences in senior high school* (Master's thesis). Retrieved August, 26, 2013, from <http://cloud.ncl.edu.tw/thu>.
- Crerand, M. L. (1993, April). *From first language literacy to second language proficiency to second language literacy: The act of writing in a foreign language context*. Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, Georgia, USA.
- Diliberto, J. A. & Algozzine, B. (2004). Improving descriptive sentence writing in elementary students. *Preventing School Failure*, 48 (4), 34-36.

- Dong, Y. R. (1998, March). *The impact of native language literacy on ESL college freshmen's writing of argumentative essays*. Paper presented at the Annual Meeting of the American Association for Applied Linguistics, Seattle, Washington, USA.
- Flowerdew, J. (2000). Discourse community, legitimate peripheral participation, and the nonnative-English-speaking Scholar. *TESOL Quarterly*, 34(1), 127-150.
- Galvan, J. L. & Kamhi-Stein, L. (1995). *A proposed ESL program for California State University, Los Angeles*. Los Angeles, CA, USA: California State University. (ERIC No. ED407842).
- Hall, H. (2001, March). *When background matters: Three writing center employees' views on ESL students*. Paper presented at the Annual Meeting of the Conference on College Composition and Communication, Denver, Colorado, USA.
- Hauck, M. K. (1969). *The case for descriptive writing*. (ERIC No. ED062352).
- Holliway, D. R. (2004). Through the eyes of my reader: A strategy for improving audience perspective in children's descriptive writing. *Journal of Research in Childhood Education*, 18(4), 334.
- Hu, G. (2007). Developing an EAP writing course for Chinese ESL students. *RELC journal: A Journal of Language Teaching and Research*, 38(1), 67-86.
- Johannessen, L. R. (1995, March). *Teaching descriptive/narrative writing: Strategies for middle and secondary students*. Paper presented at a Teachers' Institute Inservice Program at Indian Prairie Community Unit School District 204, Naperville, IL.
- Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage Publications.
- Li, Y. (2006). Negotiating knowledge contribution to multiple discourse communities: A doctoral student of computer science writing for publication. *Journal of Second Language Writing*, 15(3), 159-178.
- Manery, R. (2003). *Cosmic oranges: Observation and inquiry through describing writing and art*. International Reading Association, Newark, DE, USA. Retrieved from ERIC database. (ERIC No. ED477994).
- McCarthy, S., Guo, Y. & Cummins, S. (2005). Understanding changes in elementary Mandarin students' L1 and L2 writing. *Journal of Second Language Writing*, 14, 71-104.
- Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis: An expanded source book* (2nd Ed.). Thousand Oaks, CA, USA: Sage.
- Nowalk, T. (2010). Solving the English-as-a-second language writers' dilemma. *Inquiry*, 15(1), 53-66.

- Rorschach, E., Tillyer, A. & Verdi, G. (1992, March). *Research on ESL composition instruction: The fluency-first approach*. Paper presented at the Annual Meeting of the Teachers of English to Speakers of Other Languages, Vancouver, British Columbia, Canada.
- Schlumberger, A. & Clymer, D. (1989). Tailoring composition classes to ESL students' needs. *Teaching English in the Two-Year College*, 16(2), 121-28.
- Smalley, R., Ruetten, M. & Kozyerv, J. (2000). *Refining composition skills: Rhetoric and grammar* (5th ed.). Boston, MA: Heinle & Heinle.
- Smith, J. J. (2000). *Descriptive writing: A thematic unit. Pennsylvania, PA, USA: Lamberton middle school*. Retrieved from ERIC database. (ERIC No. ED448475)
- Spitzer, M. (2012, September 26). Teaching students to show, not tell. *Chronicle of Higher Education*. Retrieved from <http://chronicle.com/article/Teaching-Students-to-Show-Not/134614>
- Stancil, G. (1973). *Descriptive writing unit*. Washington, DC, USA: Office of Education. Retrieved from ERIC database. (ERIC No. ED096646)
- Tickoo, A. (2001). How to create a crisis: empowering the ESL writer with lessons from narrative art. *International Journal of Applied Linguistics*, 11(1), 21-36.
- Van Gilst, L. & Villalobos, J. (1996, March). *The five-paragraph-essay: Legacy or liability in English writing classrooms outside the U.S.* Paper presented at the Annual Meeting of the Conference on College Composition and Communication, Milwaukee, WI.
- Villarreal, L. H. (1990). *On writing a "homegrown" text of educational materials: Intercultural orientation activities for international ESL students: 50 module lessons*. Vancouver, BC, Canada: University of British Columbia. Retrieved from ERIC database. (ERIC No. ED356671).
- Wenger, E. (2002). *Community of practice: Learning, meaning, and identity*. Cambridge, United Kingdom: Cambridge University Press.
- Wyrick, J. (2011). *Steps to writing well*. Boston, MA, USA: Wadsworth.
- Yan, Yi. (2010). Towards an eclectic framework for teaching EFL writing in a Chinese context. *US-China Education Review*, 7(3), 29-33.
- Yin, R. K. (1981). The case study crisis: Some answers. *Administrative Science Quarterly*, 26(1), 58-65.

Appendix 1

English Composition Prompts of Taiwan College Entrance Exam

(the Chinese information is retrievable from Taiwan College Entrance Exam Center Website
<http://www.ceec.edu.tw/AppointExam/AppointExamPaper.htm>)

Exam year	Exam Topic
2013	There are two upcoming innovative products: the invisibility cloak and the smart glasses. The invisibility cloak allows the wearer not to be seen/found by others meanwhile it is water- and fire-resistant. The smart glasses have a complete scanning and recording function allowing the wearer to see all the living creatures hindered by any obstacles. The glasses can also record every scene you have seen or experienced. If you have the chance to be given one of these two innovative products, which one will you choose? Use it as a topic to write an essay of at least 120 words. Your essay should be divided into two paragraphs: state your reason(s) of choosing this specific product and how you plan to use it in the first paragraph; explain why you do not choose another one and the possible problems it may bring in the second paragraph.
2012	Use “sports” as a topic to write an essay of at least 120 words. State the sport activity you play most often. Your essay should be divided into two paragraphs. The first paragraph states how you play it (such as the place, the way, the exercise equipments, etc.); the second paragraph states why you play it and its influence on your life.
2011	How do you think a commencement shall be? Shall it be a touching, a bustling, or a solemn occasion? Write an essay stating your opinions of it. The first paragraph should state the meaning of the commencement to you; the second paragraph should state how to arrange the commencement for the showing of such meaning.
2010	What is the most unforgettable smell in your memory? Write an essay about it with at least 120 words. Your essay should be divided into two paragraphs: the first paragraph should describe the occasion you smelt it and your perception of it when you first smelt it; the second paragraph should describe the reasons such smell makes you unforgettable.
2009	If you could freely enjoy your everyday life without worrying about the financial condition, how would you spend your day? Write an essay about it:

	the first paragraph describes whom you would invite to spend the day and the reasons; the second paragraph describes where you would go, what you would do, and the reasons.
2008	Commercials can be seen everywhere in our daily lives. Write a 120-150 words essay introducing one commercial that impresses you. The first paragraph states the content of the commercial (such as the theme, the scenario, the music, and the scene, etc.); the second paragraph states the reasons you are impressed by it.
2007	Can you imagine a world without electricity? Write an essay about it. The first paragraph describes how the world without electricity will be; the second paragraph states its merits or drawbacks, and provide the examples to illustrate your points.
2006	There are some moments that people feel wronged because of being misunderstood. Write an essay about it with at least 120 words. The first paragraph describes your experience(s) of being misunderstood; the second paragraph describes the lessons you learned out of it/them.
2005	Suppose that your high school classmates plan to hold the first class reunion after the college entrance exam is over and that you are asked to be the activity coordinator. Write an essay about your reunion plan. The essay should be divided into two paragraphs: the first paragraph states the activity details, including the time, and place; the second paragraph states the reasons of your activity ideas.
2004	Write an essay of at least 120 words about “Travel Is The Best Teacher.” The first paragraph states the merits of travelling; the second paragraph illustrates the points by providing your travelling experiences.
2003	Quizzes and exams of all kinds have become a necessary part of Taiwanese high school students’ lives. Write an essay of 120-150 words about it. Your essay should consist of two paragraphs: use “Exams of all kinds have become a necessary part of my high school life” as a topic sentence in the first paragraph; use “The most unforgettable exam I have ever taken is ...” as a beginning sentence in the second paragraph for the development of further details.

Language Learning Strategy Use in an American IEP: Implications for EFL

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Abstract

This study employed the Strategy Inventory for Language Learners (SILL) to investigate the frequency and types of language learning strategies used by 65 students studying English as a Second Language (ESL) in a university Intensive English Program (IEP) in the western United States. Students came from 15 different countries and represented three instructional levels within the program. Results indicated that frequency of strategy use increased from the lower intermediate to the upper intermediate level and also from the upper intermediate to the advanced level. However, only differences between the lower intermediate and the advanced level were statistically significant. IEP students reported most frequent use of social and metacognitive strategies. The study supports observations from other studies indicating that

learners in ESL environments use social strategies more frequently than do learners of English as a Foreign Language (EFL). The researchers, an experienced EFL teacher in China and a veteran ESL teacher in an American IEP, highlight the differential use of social strategies as a prominent feature that may distinguish ESL and EFL learning contexts. The authors finish with a brief discussion of the implications of this observation for teachers of EFL.

Keywords: language learning strategies, metacognitive strategies, social strategies, ESL vs. EFL, intensive English programs

Introduction

An idea with considerable intuitive appeal, both for language teachers and for many foreign or second language students, is the idea that students can take “specific actions ... to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations” (Oxford, 1990, p. 8). Indeed, it is an idea that has inspired a substantial body of research under the designation of language learning strategies. To the extent that it can make a difference in the lives of learners, the idea has obvious relevance for teachers and learners alike.

Another widely acknowledged idea is that the context within which teaching and learning takes place makes a difference both for teaching and for learning. In the world of English language teaching, it has become virtually general knowledge that EFL (English as a Foreign Language) contexts and ESL (English as a Second Language) contexts tend to afford participants quite different experiences in terms of language input, social environment (both in and out of the classroom), perceived utility (of tasks, activities, language focus), and multiple other factors.

The current study is situated in a university Intensive English Program (IEP) in the western United States. The researchers, a visiting scholar from China (where English language teaching is primarily EFL), and his host, a professor in the IEP (an ESL setting), both with an interest in the cross-cultural dimensions of language teaching and learning, employed the Oxford (1990) Strategy Inventory for Language Learners (SILL) to compare the strategy profiles of a diverse cohort of university-aged international students. The participants, from diverse countries around the world, differed in instructional level, gender, and nationality. The original intent of the study had been to examine whether strategy profiles, as measured by the SILL, would differ across groups differentiated according to nationality. However, along the

way, we found it necessary to disregard nationality because many countries were represented in the program by only one or two individuals. Nevertheless, the study provided a glimpse into the world of an IEP with a multi-national student body composed largely of students newly entering an ESL setting after having undergone their foundational English language learning primarily in EFL settings. The research therefore makes a modest contribution to our understanding of language learning strategy use in the relatively under explored heterogeneous context typical of Intensive English Programs in many Anglophone countries that host international students. It also perhaps has something to say about how language learning strategy preferences might respond to changes in context and may have important implications for EFL teachers vis-à-vis the promotion of social learning strategies.

Review of Literature

Overview of language learning strategies

The idea that more effective language learners are strategic, in ways that less effective learners perhaps are not, is generally traced (within the literature that applied linguists and language teachers tend to read) to articles by Rubin (1975), Stern (1975), and Naiman, Frohlich, Stern & Todesco, (1978) on the “good language learner,” which has subsequently grown into a large body of research on language learning strategies.

Since the seminal articles of Rubin and of Stern, cited above, investigations of language learning strategies have been carried out using a number of methods to address several closely related problems. The earliest work was primarily directed at clarifying the construct by enumerating the variety of strategies that learners seemed to use and by trying to categorize them in ways that make sense. Researchers working on projects to characterize and label strategies devised a number of taxonomic schemes. Widely cited examples include those of O’Malley and Chamot (1990) and Oxford (1990).

Arising naturally out of efforts to enumerate and arrange strategies in taxonomic families and at the same time contributing to the endeavor, researchers have also tackled the problem of how best to detect and assess learners’ patterns of strategy use. Some studies have employed relatively more subjective self-reports, such as surveys, interviews, learner diaries and journals. Other studies have aimed for greater objectivity, seeking to observe learners in the process of using strategies. For example, think-aloud methods, in which learners report what they are doing, at the moment, in response to a particular task have been especially useful for this purpose.

The advantages and disadvantages of various approaches have also been thoroughly discussed. (See, for example, Cohen & Scott, 1996). In short, surveys and interviews—and to a lesser extent perhaps diaries and journals—depend on a learner’s ability to recall and assess behavior that may or may not have occurred recently, and may or may not be memorable enough to easily or exhaustively recollect and quantify. Nevertheless, researchers, attracted perhaps by the relative ease and convenience of surveys, have favored them over other methods; consequently, survey studies are surely the most widely published types of research on language learning strategies. Methods designed to make strategies-in-use for a particular purpose more open to inspection, although potentially more illuminating, are more difficult to conduct and have been relatively rare by comparison.

Another avenue that has received a lot of attention from researchers is the question of whether or not strategies can be taught and whether strategy training can make a difference in a learner’s achievement. Strategy training studies have seemed particularly appealing to language educators because they promise to move past mere profiling, to the possibility that language learning strategies research might have pedagogical implications. Although some studies have showed strategy training to be beneficial for some measured aspects of language learning, in some contexts, overall the effects of controlled programs have been mixed at best (Chamot, 2005).

Interventions dedicated with single-mindedness of purpose to strategy training may lead to increases in students’ use of strategies, but results have not been consistent across various contexts and the magnitude of benefits often seems too small to justify the time and energy spent. Nevertheless, several studies have shown that simply calling students’ attention to the notion of strategic learning may have positive effects on student motivation, and may equip students with a knowledge and appreciation of the potential value of strategies (Flaitz & Feyton, 1996; Nunan, 1997). What seems a most reasonable implication for teachers to take from the collective strategies training literature is that, at least, talking with students about language learning strategies, or making strategies an auxiliary focus of any language class is a worthwhile goal (Redfern & Weil, 2002).

As interest in the notion of strategic language learning has waxed and waned over several decades, researchers have carved out more specialized niches often focused on particular domains of language use and development. Scholars and teachers of reading, for instance, have found it necessary to specify more precisely the strategies that readers employ (See, for example, Anderson, 1991). Moreover, the identification of types and categories of

strategies specific to reading have in turn led to the construction of more detailed subdomains, for example, vocabulary learning strategies used in relationship to reading (Gu, 2003).

Meanwhile, among the earliest advocates of the field, there has been a general shift in focus away from a preoccupation with the defining, enumerating, classifying, and teaching of strategies-as-skills towards a greater recognition of the motivational aspects of strategy use, in which “will” (i.e., motivation) is at least as important as “skill.” This has led some researchers to emphasize the self-regulatory aspects of strategic action (e.g., Tseng, Dörnyei & Schmitt, 2006), and some scholars that pioneered the earlier work on language learning strategies have been rethinking how their work fits into the more current trend, whereby language learning strategy frameworks are being subsumed by the notion of self-regulated learning. (See, for instance, Oxford, 2011)

Yet despite the apparent shift away from earlier preoccupations, some of the original research directions still enjoy a following, a result perhaps owing to the globalization of English language teacher training. Oxford’s (1990) Strategy Inventory for Language Learners (SILL), for instance, arguably the most widely used instrument for getting a general picture of a learner’s self reported language learning strategy use, has been widely adopted in recent years by researchers in Asia and the Middle East, where English is widely studied and taught as a foreign language. Simultaneously, in countries such as the U.S., where the number of international students studying in Intensive ESL settings grows annually, teachers and researchers find themselves presented with fresh opportunities to investigate the extent to which EFL contexts and ESL contexts might promote different types of strategies, or whether learners coming into ESL settings from different cultural/educational backgrounds might exhibit between group differences in strategy use.

The Strategy Inventory for Language Learners (SILL)

The Strategy Inventory for Language Learners (SILL) (ESL/EFL version) has come to be the most widely used survey for investigating language learning strategies across multiple contexts and cultures. The SILL consists of 50 statements reflecting various actions learners (across a wide range of language learning contexts) typically take when trying to learn a language. For example, “I think of relationships between what I already know and new things I learn in English;” or “I look for opportunities to read as much as possible in English.” Respondents make frequency judgments, by means of a 5-point Likert scale, reflecting the extent to which they feel a statement is true of them:

1. Never or almost never true of me
2. Usually not true of me
3. Somewhat true of me
4. Usually true of me
5. Always or almost always true of me

The SILL yields an overall score based on the 50 items. Researchers typically differentiate three levels of strategy use based on frequency ranges recommended by Oxford (1990): high use (3.5-5.0), medium use (2.5-3.4), and low use (1.0-2.4). The most widely used Strategy Inventory for Language Learning is Oxford's (1990) scheme, which hypothesizes a 6-factor categorization of strategies:

1. Memory strategies are actions that a learner takes to make connections between one L2 item and other things that the learner knows. The purpose is to facilitate storage and retrieval of new L2 items.
2. Cognitive strategies involve more elaborate manipulation of L2 material to foster greater understanding.
3. Compensation strategies are actions taken by a learner to overcome limitations in his/her L2 knowledge, e.g., in the vocabulary or grammar necessary for comprehending or communicating.
4. Metacognitive strategies involves the ways in which a learner sets goals, plans for learning, monitors progress, and in general manages the overall learning process.
5. Affective strategies refer to the measures that a learner employs to control mood, anxiety, motivation and the like, especially in the face of discouragement.
6. Social strategies are those actions a learner employs that involve interacting with people not only linguistically but in all the various ways that facilitate interpersonal and cultural understanding.

Sub-scores are often reported for each of these hypothesized factors, although attempts to validate scales that represent clearly distinguishable categories have generally not been entirely successful (Heo, Stoffa & Kush, 2012; Woodrow, 2005). Interpretation of studies, too numerous for us to mention, that have been conducted assuming the validity of the 6-factor SILL, current study included, should take this uncertainty into account in interpreting results of studies based on the SILL.

Nevertheless, despite the SILL's shortcomings, it is still about as good a standardized tool as we currently have for gauging the overall general strategic preferences of particular groups and subgroups of learners. It typically has high reliability, (ranging between .85-to mid .90s) across many reported studies, and reasonable evidence has been put forward to demonstrate content, criterion-related, and construct validity (Oxford & Burry-Stock, 1995). It has been shown, for instance, that groups of individuals that share particular identifiable

characteristics often have different profiles. For example, students learning English in second language contexts (e.g., ESL settings) often report greater use of strategies than students in foreign language (e.g., EFL) contexts (Oxford & Burry-Stock, 1995). In addition, advanced level students, students with higher achievement or higher measured proficiency, and students at higher levels in the educational system (e.g., university vs. high school) have reported using strategies with greater frequency (Alhaisoni, 2012; Green & Oxford, 1995; Griffiths, 2003; Khalil, 2005; Liu, 2004).

Strategy use has also been shown to vary by gender. Studies have consistently shown overall strategy use to be higher for girls and women (Ehrman & Oxford, 1988; Green & Oxford, 1995; Khalil, 2005; Liu, 2004; Ok, 2003). Fewer studies seem to have reached contradictory conclusions; however, a few have (Griffiths, 2003; Nisbet, Tindall & Arroyo, 2005; Shmais, 2003). There is evidence that strategy use is associated with factors such as college major, disciplinary focus, or career choice (Oxford & Ehrman, 1988; Oxford & Nyikos, 1989; Peacock & Ho, 2003) and with personality (Ehrman & Oxford, 1988, 1990).

In spite of the ambiguities that have surrounded efforts to define the factors comprising the overall SILL, researchers have typically reported scores on various hypothesized subscales to compare the supposed strategy preferences of various groups. Across many studies, metacognitive strategies tend to be either the most frequently reported or sometimes the second most frequently reported of strategies. Memory strategies (and affective strategies unless combined with social) tend to be less frequently reported. Social strategies often rank among the top three; however, our (the writers') reading of the literature leads us to conclude that compared with learners in foreign language learning contexts, learners in second language environments may make greater use of social strategies. Griffiths and Parr (2001), for instance, found social strategies to be the most frequently used among ESL learners in New Zealand, and Hong-Nam and Leavell (2006) found social strategies to be the second most frequently used strategies, after metacognitive, among ESL learners in an intensive English program in the U.S. The current study, like that of Griffiths and Parr, found that ESL students reported the greatest use of social strategies, followed by metacognitive strategies.

Current Study

The purpose of this study was to assess the language learning strategies of 65 students from 15 different countries, who were attending a university Intensive English Program in the western United States during the 2012-2013 academic year. The study might very well be seen as a companion study to that of Hong-Nam and Leavell (2006) because of the similarity

between their context and ours. Hong-Nam and Leavell described their study as an investigation of the language learning strategy use of 55 ESL students (30 males and 25 females) representing different nationalities and different proficiency levels in a college IEP located in the western United States. The current study, also conducted in an American IEP, like that of Hong-Nam and Leavell, began with the objective of determining:

1) the frequency of self-reported strategy use among IEP students, both overall and across the 6 strategy types (memory, cognitive, compensation, metacognitive, affective, and social) as defined by the Strategy Inventory for Language Learners, and

2) whether there would be any differences in strategy use among students as a function of nationality, level of instruction, or gender.

The two studies are significant because there have been relatively many studies of language learning strategy use in English as a Foreign Language (EFL) settings and relatively fewer studies in English as a Second Language (ESL) settings. There is thus a need for more data bearing on the question of whether students in EFL and ESL settings exhibit similar or dissimilar strategy preferences.

Methods

Participants

Seventy students enrolled in the university's small Intensive English Program (IEP) volunteered to participate in the study. The researchers made an effort to visit all classes in the program over two semesters to recruit as many volunteers as possible. Students from all four levels of the program participated, yielding the following distributions: level one (5), level two (21), level three (21), and level four (23). The 5 level-one students were subsequently dropped from the study due to concerns that they may have had difficulty understanding the survey. The sixty-five remaining students represented 15 countries. Table 1 below summarizes the demographic characteristics of the participants in this study.

Instrument

The 50-item Strategy Inventory for Language Learners (SILL), version 7.0 for ESL/EFL learners, described in detail in the literature review section, was used to measure the participants' self-reported use of language learning strategies. Cronbach's α was calculated as a measure of the instruments reliability, using the overall scores of the sixty-five participants. Reliability was .95. A brief additional questionnaire was attached to the SILL to gather

necessary background information, such as age, gender, nationality, level in the program, and several other program-related items.

Data collection and analysis

The first author, who had been a participant observer in many classes within the program, described the project to prospective participants in several classes across the program. The classes were chosen to maximize outreach so that as much as possible every student in the program had an opportunity to participate. The voluntary nature of the activity was stressed, including the fact that participating or not participating would have no effect on a participant's grade. Prospective participants were invited to complete the SILL and the demographic information at a time and place of their own choosing, but time was reserved at the end of several classes if anyone wished to complete the survey then; most chose to complete the survey on the spot.

Table 1: Demographic characteristics of participants

	n = 65	%
Instructional Level		
L2 - lower-intermediate	21	32.3
L3 - upper intermediate	21	32.3
L4 - advanced	23	35.4
Gender		
Male	40	61.5
Female	25	38.5
Nationality		
China	29	44.6
Saudi Arabia	12	18.5
South Korea	6	9.2
Chile	5	7.7
Japan	2	3.1
Libya	2	3.1
Brazil	1	1.5
Burma	1	1.5
Cambodia	1	1.5
Congo	1	1.5
Dominican Republic	1	1.5
France	1	1.5
Iran	1	1.5
Iraq	1	1.5
Turkey	1	1.5

As can be seen from Table 1, the distribution of participants by nationality was heavily skewed towards Chinese students, and to a lesser extent, Saudis, with over half of the

other countries represented by only one student. This made the original intent to compare strategy use across culture or nationality impracticable. We therefore confined our analysis to just two independent variables: gender and instructional level within the IEP. One-way analysis of variance (ANOVA) was used to evaluate the overall differences in strategy preferences of all program participants as a group. Scheffé post hoc comparisons were used to determine where differences lay. Multivariate analyses of variance (MANOVA) was used to evaluate frequency of use for the six strategy subtypes that comprise the overall SILL as a function of gender and instructional level; Scheffé post hoc procedures were used to make pair-wise comparisons.

Results

Overall strategy use

Table 2 gives basic descriptive statistics for overall strategy use and for the six strategy subtypes that comprise the SILL. Mean overall frequency of strategy use among students in the program was high (falling within the 3.5-5.0 range). Moreover, use of all types of strategies, except memory strategies, was also high, with even memory strategies (M=3.49) falling just below the threshold value of 3.5.

Table 2: Frequency of strategy use overall and for each of 6 types of language learning strategies

Strategy Type	Mean	SD	Min	Max	Rank	F	Sig	Differences
Memory	3.49	0.72	1.33	5.00	6	6.85	0.00	Meta, Soc>
Cognitive	3.73	0.60	2.07	4.79	4			Cog, Aff
Compensation	3.80	0.67	1.83	5.00	3			
Metacognitive	3.97	0.62	1.90	5.00	2			
Affective	3.55	0.71	1.80	5.00	5			
Social	4.06	0.81	1.50	5.00	1			
Overall	3.76	0.55	2.20	4.78				

One-way analysis of variance (ANOVA) comparing mean frequencies of strategy types by IEP students as a group indicated a statistically significant difference in strategy type preferences, $F(5, 384) = 6.85, p < 0.00$. Scheffé post hoc comparisons ($p < .05$) showed that students in the IEP reported more frequent use of social and metacognitive strategies as

compared with affective or memory strategies. Although mean frequencies of use for social and metacognitive strategies were also greater than those for cognitive and compensation strategies, the differences were not statistically significant. There were also no statistically significant differences in mean frequencies for affective or memory strategies as compared with compensation or cognitive strategies.

A rank ordering of the mean scores for individual items on the SILL (see Appendix) gives a sense of IEP students’ strategy preferences item by item. Overall, IEP students reported high use ($M = 3.5-5.0$) of 47 separate strategies with metacognitive and social strategies occupying 8 of the top 10 rankings. No strategies were ranked as low use ($M = < 2.5$), and only 7 were ranked as medium use; these included 4 memory strategies, 3 cognitive strategies, and an affective strategy.

Strategy use by gender and instructional level

Descriptive statistics for participants grouped by gender and by level of instruction are shown separately in Table 3 and Table 4 respectively. Since the SILL survey consists of six subsections, each representing a different strategy type, data was analyzed by means of a two-way multivariate analysis of variance (MANOVA) with gender and instructional level as independent variables and the scores on each of the six strategy types as dependent variables.

Table 3: Frequency of strategy use by gender

Strategy Type	<u>Male</u>		<u>Female</u>	
	Mean	SD	Mean	SD
Mem	3.44	.76	3.57	.65
Cog	3.76	.58	3.67	.65
Comp	3.75	.68	3.87	.65
Meta	4.07	.61	3.86	.65
Aff	3.56	.73	3.66	.67
Soc	4.02	.79	4.11	.85
Overall	3.77	.54	3.76	.56

The two-way MANOVA revealed significant multivariate main effect for level, Wilks’ $\lambda = .660$, $F(12, 108) = 2.078$, $p = .024$, partial eta squared = .188; power to detect the effect

was .913. A significant multivariate main effect was also observed for gender Wilks' $\lambda = .766$, $F(6, 54) = 2.742$, $p = .021$, partial eta squared = .234; power to detect the effect was .833. The interaction effect was not significant, Wilks' $\lambda = .740$, $F(12, 108) = 1.461$, $p = .150$.

Given the significance of the main multivariate effects, the univariate main effects were examined for level and gender. Significant univariate main effects for level were obtained for memory strategies, $F(2, 59) = 4.169$, $p = .020$; cognitive strategies, $F(2, 59) = 7.411$, $p = .001$; compensation strategies, $F(2, 59) = 4.027$, $p = .023$; and for affective strategies, $F(2, 59) = 4.984$, $p = .010$. No significant effects were found for gender. (Bonferroni adjustment for multiple comparisons was applied.)

Table 4: Frequency of strategy use by level of instruction within program with p-values for significant Scheffé results

Strategy Type	Lower Intermediate		Upper Intermediate		Advanced		Sig	Difference
	Mean	SD	Mean	SD	Mean	SD		
Mem	3.12	0.60	3.58	0.54	3.75	0.84	$p = .014$	L4 > L2
Cog	3.40	0.62	3.72	0.53	4.03	0.51	$p = .002$	L4 > L2
Comp	3.54	0.70	3.73	0.69	4.09	0.51	$p = .024$	L4 > L2
Meta	3.80	0.70	4.00	0.57	4.15	0.59	NS	
Aff	3.42	0.68	3.40	0.73	3.95	0.57	$p = .020$; $p = .015$	L4 > L2 L3 > L2
Soc	3.90	0.87	4.03	0.88	4.22	0.66	NS	
Overall	3.50	0.54	3.74	0.49	4.02	0.49		

Pair-wise comparisons for instructional level, using Scheffé post hoc tests ($p < .05$), indicated that Level 4 (advanced) IEP students reported significantly more frequent use of memory, cognitive, compensation, and affective strategies than did Level 2 (lower intermediate) students. Level 4 students also reported significantly more frequent use of affective strategies than Level 3 (upper intermediate) students. No other significant differences were found between Level 3 and Level 4 students, and no significant differences were found between instructional levels in the use of social or metacognitive strategies (See Table 4).

Interpretation of results

These results support several generalizations about language learners that have been widely reported by other researchers. First learners at higher levels of proficiency or advanced stages of learning (the proxy variable here being advanced level of instruction) tend to make greater use of strategies than do students at lower proficiency levels or novice stages of learning (the proxy here being lower intermediate level of instruction). Students in the Intensive English Program (IEP) that were the focus of this study showed evidence of increasing use of strategies across instructional levels from lower intermediate through upper intermediate to advanced instructional levels. This observation is based, of course, on a cross-sectional analysis, not a longitudinal one, and is therefore subject to the limitations inherent in cross-sectional analyses. Secondly, the results support the widely reported observation that metacognitive strategies tend to be among the most widely used of the language learning strategy types represented by the SILL, especially as contrasted with memory strategies and affective strategies.

On the other hand, students in this second language immersion setting reported much greater use of social strategies than is often reported in research done in foreign language settings. This finding is consistent with the parallel finding of Hong-Nam & Leavell (2006) who found that students in another IEP in an American setting favored metacognitive and social strategies over other types of strategies. However, the results of Hong-Nam and Leavell were more mixed suggesting that only advanced students favored social strategies over all other strategies, while our results suggest that social strategies are favored over other types of strategies at all instructional levels.

The most notable difference between our results and Hong-Nam and Leavell's is that the latter found a curvilinear relationship between proficiency level and strategy use, with intermediate students exhibiting more frequent strategy use than either beginning or advanced levels, whereas we found no such relationship.

Studies on the relationship between gender and strategy use have been somewhat ambiguous, and this study only reinforces that ambiguity. While many earlier studies suggested that women make greater overall use of language learning strategies than men, there have been a number of recent studies, as cited earlier in the review of literature, that contradict this notion. The current study is consistent with many of these more recent studies. In this IEP, men's and women's mean overall use of strategies was similar, and there was no statistically significant difference between their use of strategies either overall, or by strategy type.

Discussion

A consistent finding in many studies that have employed the SILL is that metacognitive strategies often rank among the most widely used of language learning strategies in both EFL and ESL settings. While social strategies are sometimes reported among the top strategies in EFL settings, the finding is not consistent across contexts. On the other hand, the current research lends support to the proposition that in the ESL context, social strategies consistently rival and may even surpass metacognitive strategies in frequency of use.

Perhaps it is not a great surprise that students in a second language immersion setting would make greater use of social strategies than do students in a foreign language learning setting. The immersion setting clearly offers greater opportunities to employ social strategies. Moreover, university-based IEPs tend to benefit from the richness of the campus environment, which affords students opportunities to extend language learning to settings outside the formal classroom through participation in student organizations, sports clubs, etc. In EFL environments, on the other hand, social strategies are more likely to rank lower on the list of strategies that students find relevant to their learning. It is our assumption that social strategies are more likely to be seen as relevant when the target language is seen as having an authentic purpose. Therefore, ESL teachers are clearly in an enviable position, compared to EFL teachers, who may find it extraordinarily challenging to create a learning environment in which learners have a real need, if not a want, to use the target language functionally.

Indeed, the first author, a visiting scholar and experienced university EFL teacher in China, is currently analyzing interview data collected subsequent to the completion of the present study. He finds that Chinese students, newly arrived in the American university setting, are acutely aware of and trying to respond to contingencies that are likely to naturally increase social strategy use. A frequently expressed generalization is that when studying English at home in China, classes were teacher-centered, focused extensively on grammar and on the reading and writing of English, and students were concerned primarily with passing exams, finding very little need or opportunity to engage in English for social purposes. As a consequence, although students felt somewhat prepared for tasks involving reading and writing, they felt particularly inadequate with regard to their listening and speaking abilities, often referring to their perceived lack of oral ability as “deaf and dumb English.”

On the other hand, in the American IEP that is hosting them, English is the very currency of social life. Moreover, although reading and writing are certainly prominently featured in the curriculum, classes are small and the conditions are optimal for their teachers to arrange classroom activities that often involve small group interactions, often around texts,

or around recorded video media with classmates who do not speak Chinese, thus placing a premium on the use of English for genuine communication. These kinds of highly social academic interactions often come as a shock to students whose past classroom experiences were with teachers who did all of the talking (and not always exclusively in English).

What are the implications for EFL teachers? Considering the steady increase in the numbers of their students who need or want functional ability in English, for education, career advancement, business, or travel, EFL teachers must continue to both improve their own English language proficiency, especially their oral proficiency, and to experiment with teaching methods that encourage their students to employ social learning strategies. EFL teachers can design lessons and organize their classes in ways that simulate, approximate, and perhaps even achieve genuine social interaction. The obstacles, as recently elaborated by Chen and Goh (2011), are of course well known. However, we will not repeat them here, preferring rather to express the optimistic opinion that the obstacles of the past are not insurmountable. Indeed, the first author has witnessed a slow but steady change in teaching methods in his institution in China, and has himself worked and is still working to transform his own classes in ways that make them more socially interactive.

Moreover, beyond simulating and approximating conditions that promote social learning strategies, which are admittedly challenging in the homogenous classrooms of most EFL settings, there are other innovative things that EFL teachers can do. To the extent that EFL teachers can orchestrate opportunities for their students to engage in authentic communication with proficient users of English, they would no doubt see a parallel rise in their students' use of social learning strategies. Constructing learning environments that include fluent speakers of English in contexts where English speakers are rare may be a problem best solved by collaborative interaction between teachers in EFL settings and those in Anglophone settings, perhaps through innovative use of social networking tools in the classroom or distance learning platforms. Wu and Marek (2010), for instance, have demonstrated this by successfully employing live videoconferencing via Skype to connect Taiwanese EFL students with a native English speaker at a cooperating American university. Participating students expressed considerable enthusiasm over the experience, and the authors documented positive effects on students' motivation and confidence in their ability. Wu and Marek have suggested that opportunities for cooperative arrangements such as this are likely to arise when EFL instructors network and socialize with native speakers whenever possible, looking for ways to give their students experience in interacting with fluent speakers of English through the use of technology.

Conclusion

This study highlights the central role that social language learning strategies play in the ESL as contrasted with the EFL context, particularly in university IEPs. It also highlights the inherently strategic approach of language learners in an IEP with a diverse population of international students, for whom the IEP may be a major developmental steppingstone. The prominence of social strategy use in the IEP studied here parallels the findings of other studies that have involved IEPs and in this sense argues for the generalizability of the current findings, despite the caveat that must always be acknowledged regarding the non-generalizability of small samples taken from specific, local educational contexts. The generally high level of strategic awareness reported by IEP students, which also reinforces similar results from other ESL contexts does not point to a need for systematic, direct strategy training (at least in the IEP setting) that would only compete for time with tasks and activities designed simply to develop functional skill in the use of language. Many EFL instructors, on the other hand, probably can and should do more to promote social learning strategies, which they may however be able to do by structuring their classes in ways that encourage their use and by innovative use of technologies for connecting their students with fluent speakers of English.

References

- Alhaisoni, E. (2012). Language learning strategy use of Saudi EFL students in an intensive English learning context. *Asian Social Science*, 8(13), 115-127.
- Anderson, N. J. (1991). Individual differences in strategy use in second language reading and testing. *The Modern Language Journal*, 75(4), 460-472.
- Chamot, A. U. (2005). Language learning strategy instruction: Current issues and research. *Annual Review of Applied Linguistics*, 25, 112-130.
- Chen, Z. & Goh, C. (2011). Teaching oral English in higher education: Challenges to EFL teachers. *Teaching in Higher Education*, 16(3), 333-345.
- Cohen, A. & Scott, K. (1996). A synthesis of approaches to assessing language learning strategies. In R. L. Oxford (Ed.), *Language learner strategies around the world: Cross cultural perspectives*. Honolulu: University of Hawai'i, Second Language Teaching & Curriculum Center.

- Ehrman, M. & Oxford, R. (1988). Effects of sex differences, career choice, and psychological type on adult language learning strategies. *The Modern Language Journal*, 72(3), 253-265.
- Ehrman, M. & Oxford, R. (1990). Adult language learning styles and strategies in an intensive training setting. *The Modern Language Journal*, 74(3), 312-327.
- Flaitz, J. & Feyten, C. (1996). A two-phase study involving consciousness raising and strategy use for foreign language learners. In R.L. Oxford (Ed.), *Language learner strategies around the world: Cross cultural perspectives*. Honolulu: University of Hawai'i, Second Language Teaching & Curriculum Center.
- Green, J. M. & Oxford, R. (1995). A closer look at learning strategies, L2 proficiency, and gender. *TESOL Quarterly*, 29(2), 261-297.
- Griffiths, C. (2003). Patterns of language learning strategy use. *System*, 31(3), 367–383.
- Griffiths, C. & Paar, J. M. (2001). Language-learning strategies: Theory and perception. *ELT Journal*, 55(3), 247-254.
- Gu, P. Y. (2003). Fine brush and freehand: The vocabulary-learning art of two successful Chinese EFL learners. *TESOL Quarterly*, 37(1), 73-104.
- Heo, M., Stoffa, R. & Kush, J. C. (2012). Factor analysis of the ESL/EFL Strategy Inventory for Language Learning: Generation 1.5 Korean immigrant college students' language learning strategies. *Language, Culture and Curriculum*, 25(3), 231-247.
- Hong-Nam, K. & Leavell, A. (2006). Language learning strategy use of ESL students in an intensive English learning context. *System*, 34(3), 399-415.
- Khalil A. (2005). Assessment of language learning strategies used by Palestinian EFL learners. *Foreign Language Annals*, 38(1), 108-119.
- Liu, D. (2004). EFL proficiency, gender and language learning strategy use among a group of Chinese technological institute English majors. *ARECLS E-Journal*, 1, 1-15. Retrieved 31 August, 2013 from http://research.ncl.ac.uk/ARECLS/vol1_documents/Dongyue/Dongyue.htm.
- Naiman, N., Frohlich, M., Stern, H. H. & Todesco, A. (1978). *The good language learner*. Toronto, Ontario, Canada: Ontario Institute for Studies in Education.
- Nisbet, D. L., Tindall, E. R. & Arroyo, A. A. (2005). Language learning strategies and English proficiency of Chinese university students. *Foreign Language Annals*, 38(1), 100-107.
- Nunan, D. (1997). Strategy training in the language classroom: An empirical investigation. *RELC Journal*, 28(2). 56-81.

- Ok, L. K. (2003). The relationship of school year, sex and proficiency on the use of learning strategies in learning English of Korean junior high school students. *Asian EFL Journal*, 5(3), 1–36.
- O'Malley, J. M. & Chamot, A. U. (1990). *Learning strategies in second language acquisition*. Cambridge, UK: Cambridge University Press.
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. New York: Newbury House.
- Oxford, R. L. (2011). *Teaching and researching language learning strategies*. Harlow, UK: Longman.
- Oxford, R. L. & Burry-Stock, J. A. (1995). Assessing the use of language learning strategies worldwide with the ESL/EFL version of the Strategy Inventory for Language Learning (SILL). *System*, 23(1), 1-23.
- Oxford, R. L. & Nyikos, M. (1989). Variables affecting choice of language learning strategies: A synthesis of studies with implications for strategy training. *System*, 17, 235-247.
- Peacock, M. & Ho, B. (2003). Student language learning strategies across eight disciplines. *International Journal of Applied Linguistics*, 13(2), 179-200.
- Redfern, S. & Weil, N. (2002). Two activities for raising consciousness of language learners' strategies. *The Internet TESL Journal*, 8(12).
- Rubin, J. (1975). What the 'good language learner' can teach us. *TESOL Quarterly*, 9, 41-51.
- Shmais, W. A. (2003). Language learning strategy use in Palestine. *TESL-EJ*, 7(2), 1-17.
- Stern, H. H. (1975). What can we learn from the good language learner? *Canadian Modern Language Review*, 31, 304-318.
- Tseng, W. T., Dörnyei, Z. & Schmitt, N. (2006). A new approach to assessing strategic learning: The case for self-regulation in vocabulary acquisition. *Applied Linguistics*, 27(1), 78-102.
- Woodrow, L. (2005). The challenge of measuring language learning strategies. *Foreign Language Annals*, 38(1), 90-98.
- Wu, W. V. & Marek, M. (2010). Making English a “habit”: Increasing confidence, motivation, and ability of EFL students through cross-cultural, computer-assisted interaction. *The Turkish Online Journal of Educational Technology*, 9(4), 101-112.

Appendix 1: Language learning strategy preferences of IEP Students

Strategy type	Strategy Number	Strategy Statement	Rank	Mean
<i>High use</i>				
<i>(3.5-5.0)</i>				
Meta	33	I try to find out how to be a better learner of English.	1	4.28
Soc	49	I ask questions in English.	2	4.26
Soc	50	I try to learn about the culture of English speakers.	3	4.23
Comp	29	If I can't think of an English word, I use a word or phrase that means the same thing.	4	4.17
Meta	32	I pay attention when someone is speaking English.	5	4.15
Meta	30	I try to find as many ways as I can to use my English.	6	4.08
Meta	38	I think about my progress in learning English.	7	4.05
Soc	45	If I don't understand something in English, I ask the other person to slow down or say it again.	8	4.02
Soc	48	I ask for help from English speakers.	9	4.00
Cog	17	I write notes, messages, letters, or reports in English.	10	3.98
Meta	31	I notice my English mistakes and use that information to help me do better.	11	3.97
Meta	35	I look for people I can talk to in English.	12	3.97
Meta	37	I have clear goals for improving my English skills.	13	3.95
Aff	40	I encourage myself to speak English even when I am afraid of making mistakes.	14	3.95
Cog	11	I try to talk like native English speakers.	15	3.94
Cog	19	I look for words in my own language that are similar to new words in English.	16	3.94
Cog	15	I watch English language TV shows spoken in English or go to movies spoken in English.	17	3.92
Comp	25	When I can't think of a word during a conversation in English, I use gestures.	18	3.92
Soc	46	I ask English speakers to correct me when I talk.	19	3.92
Cog	12	I practice the sounds of English.	20	3.91
Soc	47	I practice English with other students.	21	3.91
Mem	1	I think of relationships between what I already know and new things I learn in English.	22	3.89
Cog	13	I use the English words I know in different ways.	23	3.86
Cog	14	I start conversations in English.	24	3.86
Aff	39	I try to relax whenever I feel afraid of using English.	25	3.83
Cog	20	I try to find patterns in English.	26	3.80

(continued on next page)

Strategy type	Strategy Number	Strategy Statement	Rank	Mean
<i>High use</i> (3.5-5.0)				
Meta	36	I look for opportunities to read as much as possible in English.	27	3.78
Mem	3	I connect the sound of a new English word and an image or picture of the word to help me remember the word.	28	3.75
Mem	4	I remember a new English word by making a mental picture of a situation in which the word might be used.	29	3.75
Comp	26	I make up new words if I don't know the right ones in English.	30	3.75
Cog	21	I find the meaning of an English word by dividing it into parts that I understand.	31	3.74
Mem	2	I use new English words in a sentence so I can remember them.	32	3.71
Cog	10	I say or write new English words several times.	33	3.69
Comp	24	To understand unfamiliar words, I make guesses.	34	3.68
Meta	34	I plan my schedule so I will have enough time to study English.	35	3.68
Aff	44	I talk to someone else about how I feel when I am learning English.	36	3.66
Comp	27	I read English without looking up every new word.	37	3.63
Comp	28	I try to guess what the other person will say next in English.	38	3.63
Aff	41	I give myself a reward or treat when I do well in English.	39	3.63
Aff	42	I notice if I am tense or nervous when I am studying or using English.	40	3.60
Mem	9	I remember new English words or phrases by remembering their location on the page, on the board, or on a street sign.	41	3.57
Cog	16	I read for pleasure in English.	42	3.57
Cog	18	I first skim an English passage (read over the passage quickly) then go back and read carefully.	43	3.54
<i>Med. use</i> (2.5-3.45)				
Mem	8	I review English lessons often.	44	3.43
Mem	7	I physically act out new English words.	45	3.40
Cog	22	I try not to translate word-for-word.	46	3.23
Cog	23	I make summaries of information that I hear or read in English.	47	3.18
Mem	5	I use rhymes to remember new English words.	48	3.03
Aff	43	I write down my feelings in a language learning diary.	49	2.92
Mem	6	I use flashcards to remember new English words.	50	2.86

Building Agentive Identity Through Second Language (L2) Creative Writing: A Sociocultural Perspective on L2 Writers' Cognitive Processes in Creative Composition

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Abstract

This study examines the cognitive writing processes of three ESL creative writers. Adopting a sociocultural stance, it identifies the writers as social agents with particular self-perceptions and purposes behind their creative writing practices. Through interviews

and think-aloud story writing sessions, the study finds that the writers' present cognitive writing processes are mediated by their previous creative literacy experiences which are embedded in particular situations and embody certain values. The discussion traces the learners' self-representational and hence idiosyncratic *movement of thought* emergent in immediate creative writing tasks. It argues that the practice of L2 creative writing in pedagogic contexts can be enhanced and rationalised through a deeper understanding and appreciation of how creative writing can be performed by L2 users not only for purposes of language or literacy acquisition, but also as a self-empowering tool to achieve particular social positioning and hence self-esteem.

Keywords: community of practice, creative writing, identity, process-oriented writing research, sociocultural view, think-aloud writing

Introduction

Teachers of English as a Second Language or Foreign Language (ESL/ EFL) have shown a growing interest in using creative writing activities in their language classrooms (e.g., see *Teaching English—British Council & BBC*, 2013). In particular, Alan Maley has been a leading advocate for the use of diversified L2 creative writing activities in language classrooms. Such activities, it is argued, encourage learners to engage playfully with the target language and develop a writerly identity in the new code (e.g. Duff & Maley, 2007; Maley, 2009; Maley & Duff, 1994, 2005; Maley & Moulding, 1985). Similarly, Cook (1997) has pointed out the value of language play and the authenticity of creative fictional discourse in language learning. Indeed, EFL/ESL teachers themselves have sought to enhance their creative practice through poetry and short story writing workshops (Mukundan, 2006; Maley & Mukundan, 2011a, 2011b; Tin, 2004, 2007).

Despite such initiatives, current L2 creative writing literature, given its distinct pedagogical agenda, tends only to scratch the surface of some significant writer identity issues. Most noticeably, although it is recognised that creative writing is executed through an intricate orchestration of choices and actions, its well-springs are most often located in improvisational creative processes (See Duff & Maley, 2007; Maley, 2012; Maley & Duff, 2005; Tin, 2012). Whilst acknowledging that the essence of creativity may, ultimately, remain enigmatic, this discussion adopts the position that L2 writers' implementation of specific forms, language, or content represents identifiable choices rather than the result of an inexplicable flow of what we might term 'inspiration'. It is argued that L2 creative writing research might delve beneath the

linguistic or writing innovations manifested in the texts of the language learners and look into the L2 writers' *self-representational* actions as social agents, especially as revealed in the movements of the writers' emerging *thoughts* in the writing process (i.e. the cognitive writing processes).

Focussing on the notion of *self-identities*, this research 1) elicits three ESL creative writers' own perceptions of their past creative writing engagements through the form of interviews and 2) investigates the writers' emerging writing processes under particular short-story writing tasks through think-aloud protocols. The three East Asian writers are all interested and experienced in certain forms of creative writing, have had extensive English language learning experience, and, at the time of the investigation, were undertaking a Master's degree at a UK university. With each participant, we set up two different story-writing tasks for the think-aloud writing sessions, i.e. a free-topic task and a prompted story-continuation task. The intention was to explore those characteristic writing behaviours which each writer sustains across the two different tasks and also to investigate how each writer's cognitive writing behaviours might vary when facing these two contrasting task conditions.

Predicated upon the identity-centred theoretical framework espoused by this study (which will be elaborated upon later), our research questions can be stated as:

- 1) In relation to the two differently-conditioned story writing tasks in English, how are the ESL creative writer participants' present cognitive story writing processes connected to the individual writers' own perceptions of their past creative literacy experiences?
- 2) How are such connections shown in terms of the attention the ESL creative writers allocate to different writing behaviours and aspects of writing?

The above research questions search for the links between the three ESL creative writers' cognitive writing behaviours and their self-perceived literacy experiences in particular social milieus. The insight gained from this study could benefit language teachers and writing instructors in understanding how learners distinctively readjust their self-identity—e.g. integrating new perceptions of the self as an imaginative writer, or as a perceptive or knowledgeable person—while conducting particular cognitive processes in the creative writing activities. Such cognitive processes in L2 creative writing, in specific ways, develop individual thinking, authorial stance, and artistic engagement with the language. This is a

process of identity formation which enhances self-esteem, a positive characteristic of the motivated language learner, as shown by Rubio (2007).

In what immediately follows, the innovative nature of this L2 creative writing study is discussed.

A different approach to L2 creative writing research

Current discussions of L2 creative writing activities tend to be projected from researchers' analyses of particular features of student texts and their interpretations of the student writers' retrospective comments (e.g. Chamcharatsri, 2009; Crème & Hunt, 2002; Hanauer, 2010; Jacobs, 2008; Maley, 2009; Severino, Gilchrist & Rainey, 2010). In such discussions, it is frequently claimed that creative writing activities provide an instrument which enables the L2 learners to experience a sense of empowerment in their L2 linguistic and literary identity. Whilst we are in fundamental agreement with this position, we cannot help asking to what extent the researchers' perceptions match the L2 creative writers' reflexive constitution of their 'selves', in terms of their actual instantiations of personal knowledge and language use in the process of creative writing. That is, based on the tangible evidence of the L2 writers' cognitive actions, do L2 creative writing tasks indeed motivate the writers to make meaningful self-declarations and demonstrate inventiveness in the aspects of language, discourse or ideas? If the answer is 'yes', how do different types of creative writing tasks or stimuli facilitate the liberating possibilities attributed to this genre in characteristic ways?

We can detect two general types of creative writing task rubric for such literary activities in ESL/EFL contexts. First of all, there are relatively unrestricted and often autobiographical writing projects which aim to induce spontaneity and confidence in the writers to produce expressive, personal work (e.g. Chamcharatsri, 2009; Crème & Hunt, 2002; Hanauer, 2010; Tarnopolsky, 2005). Next, there are creative writing tasks which embrace some evident constraints for the purpose of pushing the L2 writers out of their comfort zone and eliciting the learners' nonconformist use of language and form, compared to their staple writing practices (e.g. Elgar, 2002; Maley, 2012; Tin, 2011, 2012). The question worth asking here is if L2 teachers' implementation of either of the above two approaches (relatively free or constrained creative writing tasks) in the whole class could accommodate everyone's need for particular self-identities to be performed in L2 creative writing, especially when each student brings his/her own unique writing history.

L2 learners' self-identities and their creative literary experiences

L2 creative literary activities, especially the various forms of story-telling, are not uncommon among L2 learners. Indeed, L2 creative writers are making their voices heard in various social settings outside the language classroom such as creative writing interest groups, and, increasingly, in the virtual worlds of social networks and blogs. In other words, our student-writers in the classroom are already likely to possess a concept of themselves as creative writers based on prior experience. L2 creative writers' self-identities will develop through the interplay of: 1) the particular interpretations the writers put on their previous creative literary experience, and 2) how the writers idiosyncratically engage in a present creative writing activity; the latter is importantly mediated by the former. However so far, this mediation has not been adequately addressed in the literature. Although there is indeed a body of socioculturalist L2 creative writing studies which examines writers' individual perspectives on how their past language and creative writing practices figure in their identity constructions, such studies often target distinctive social groups such as published immigrant L2 writers from particular sociohistorical periods (e.g. Pavlenko, 2004; Pavlenko & Lantolf, 2000; Rosi Sole', 2004) or immigrant children living and studying in an English-speaking context (e.g. Maguire & Graves, 2001; Yi, 2007, 2010). This study shifts attention to contemporary ESL speakers/writers, particularly East Asian students, studying in universities in the UK, who may be more representative of non-native-English-speaking students than the targets of previous research. This study also shifts attention to the L2 creative writers' cognitive writing processes to search for evidence of identity enactments.

The recent vigour manifested in L2 *identity* studies derives from the long-standing investigative initiatives in research on the motivational factors and mechanisms characterizing successful language learners. The term "motivation" is reconceptualised as "identities" to accentuate the constructed aspects of motives which are negotiated over time in particular sociocultural circumstances (Maguire & Graves, 2001). For example, in recent L2 motivation scholarship, Ushioda (2009) highlights the need to look into the dialogic interplay of the L2 individuals' agentive power and multiple social contexts, i.e. a 'person-in-context' relational view of motivation. A more intricate model was proposed by Ushioda and Dörnyei (2012) in their suggestion for 'a complex dynamic systems perspective to the study of L2 motivation' (p. 406), emphasizing 'the dynamic relationship between language, learner, and the environment on the one hand, and motivation, emotion, and cognition on the other' (ibid).

Two sociocultural theoretical frameworks are essential to this inquiry's consideration of

the L2 creative writers' self-perceived literary experience and their related self-identifications. They are the 'Community of Practice' (CoP) theory (Lave & Wenger 1991; Wenger, 1998), and the poststructuralist perspective (e.g. Bourdieu, 1991b; Norton 1995, 2000; Pavlenko & Lantolf, 2000). In the following, we shall briefly discuss the conceptual acuity of the CoP theory in explaining the effect of L2 creative writers' social localities, and how poststructuralism serves to illustrate the significant role played by agency and intentionality in creative writing practices.

CoPs: L2 creative writers' social localities

According to Lave and Wenger's (1991) 'Communities of Practice' theory, L2 creative writing practices essentially consist of the L2 writers participating in specific communities, gradually gaining competence and expertise in some situated creative literacy practices, utilizing community resources, and negotiating legitimate membership status and relations with others. It could be seen that the theory of CoP assumes a 'social constructionist view' that identity does not only exist in an individual's mind in terms of what is conceivable or desirable, but is also negotiated through one's real-world experiences in which 'people define who they are by the ways they experience themselves through participation' (Haneda, 2005, p. 273) and by the 'framework of opportunities and constraints' people find themselves in (Reay, 2004, p. 435). This view also resonates in Bakhtin's (1981) 'dialogic' perspective that one's language appropriation and use (we would extrapolate to one's appropriation and use of creative writing) is constantly mediated by the individual's interaction and participation in multiple discourses and social worlds.

CoP theory proposes that power negotiation and identity formation are 'propert[ies] of social communities' (Wenger, 1998, p. 189). It resonates palpably with the social constructionist view that 'reality, knowledge, thought, facts, texts, *selves*' are 'community generated and community maintained...entities' (our italics, Bruffee, 1986, p. 771). In comparison, the poststructuralist perspective, as discussed below, foregrounds the individual's embodied and habitual way of perceiving and acting formed through his/her accumulation of various 'capital', in other words, his/her socially constructed ability for 'practical engagement with the world' (Fairclough, 2003, p. 160).

Poststructuralist perspective: creative writing as identity-performing

The poststructuralist approach sees language and sociocultural knowledge (i.e. the 'cultural

capital') as symbolic tools employed by the agentive individuals to negotiate identities among interlocutors. Along with the emphasis on the agentive and resourceful L2 learners (see Norton 1995, 1997, 2000; Norton and Toohey, 2001), poststructuralist theory simultaneously 'explores how prevailing power relations between individuals, groups, and communities affect the life chances of individuals at a given time and place' (Norton, 1995, p. 15). Some key poststructuralist concepts (outlined below) are 'investment' (Norton, 1995, 2000), 'capital', and 'habitus' (Bourdieu, 1991a). The implications held by poststructuralist theories for L2 creative writing appear to be at least twofold.

Firstly, L2 creative writing could be employed by L2 learners as an empowering symbolic tool or 'counterdiscourse' that provides the opportunities, perhaps denied in many L2 learning activities, to construct and perform agentive and authoritative subjectivities through imaginative, personal, or aesthetic self-articulations. Some L2 creative writers actively 'invest' in particular forms of L2 creative writing because they feel emancipated through this social act. That is, through such an 'investment', L2 learners manage to construct particular L2 creative writer identities, e.g. as perceptive and insightful observers, which effectively compensate for the L2 learners' sense of loss in their self-agency, or their somehow marginalized membership status in other social sites, e.g. the language/writing classroom, or English native speaking country. This engagement with creative writing practices may also help transform L2 individuals' social relations in specific communities (e.g. a classroom, a creative writing workshop, or a virtual forum), thus strengthening L2 writers' sense of social existence and presence, along with the motivational acquisition of certain cultural, social, and symbolic 'capital'.

Secondly, L2 creative writing practices demand more than L2 writers' 'objectified linguistic resources' (Bourdieu, 1991a, p. 57), literary knowledge, or ingenious ideas (which we may also call 'creativity'). Rather, L2 creative writers' agentive stance is demonstrated through them confidently or successfully aligning their writing 'habitus', i.e. their 'embodied dispositions to...write in certain ways' (Fairclough, 2003, p. 29) previously formulated in the individuals' past literacy experience, with the kind of identity they see as appropriate, empowering, convenient, or are driven to negotiate in the immediate creative writing context (e.g. either an L2 creative writing task set by the teacher, or a self-initiated writing activity for participation in a certain creative writer community).

Building on the above discussion, in what follows, we will explain the key sociocultural conceptualization of this study that L2 creative writers' cognitive writing processes under a present task do not 'stand alone': they are 'socially structured' (Prior, 2006, p. 56).

Writer identities revealed in their emergent thoughts while writing

Writer identities (also commonly referred to as writers' voices) exist in writing processes as well as in written texts, as succinctly pointed out in Prior's (2001) statement that writers' voices are represented 'in text, mind, and society' (p. 55). L2 writing scholars in the field of Applied Linguistics are now less likely to position the notion of 'voice' along with elitist, stylistic or individualistic conceptualisations and more likely to see 'voice' as a socio-constructivist phenomenon, a particularly constructed reader-writer relationship which cannot otherwise be avoided (see Hyland & Guinda, 2012). For example, Matsuda (2001) defines his own writer voice as 'the process of negotiating my socially and discursively constructed identity with the expectation of the reader as I perceive it' (p. 39, also see Matsuda & Jeffery, 2012). Text-focused writer identity studies under the sociocultural trend operate on the theoretical construct that written texts are constitutive of writers' discursive and ideological choices 'signalling the development of identity negotiation' (Ouellette, 2008, p. 259). Based on the same theoretical assumption, writers' voices instantiated in their cognitive writing processes are the writers' improvisational instantiations of their writing 'habitus' in an immediate creative writing context. As passionately stated by Clark and Ivanič (1997), 'there is no right "route" through the physical procedures and *mental processes* involved in writing...but that the routes and practices selected are affected by the context in which the writer is operating...as well as the individual writer's *ideologies and preferences*' (our italics, p. 81). Hence, this paper takes a different approach from the traditional cognitivist stance in that cognitive writing processes are not primarily related to the L2 writers' language proficiency or writing expertise (e.g. Cumming, 1989, 1990; Rijlaarsdam & Van den Bergh, 2006). We hold the view that the cognitive writing processes are fundamentally socially mediated and always involve a negotiation of voices.

There have been many studies on writers' voices which have managed to analyse various features of written *texts*; in contrast, relatively little has been done to interpret writers' voices as shown in their cognitive writing *processes*. The conceptualisation fundamental to the present approach is that writer's voice is seen as 'doing' (Ouellette, 2008) and 'performative' (Hull and Katz, 2006). As forcefully summarised by Ouellette (2008), '[w]ithin such a social constructivist paradigm, identity in writing is comprised of *choices* an individual makes from among a set of commitments and affiliations available in particular social contexts' (our italics, p. 259). The word 'performative' hence connotes agentive manifestation and deliberate expression. Hull and Katz (2006) discuss the 'performative moments' in creative writing which occur 'when an intense awareness of the opportunity to enact one's

identity to self and others comes to the fore' (Urciuoli, 1995, cited in Hull and Katz, 2006, p. 54). Therefore, throughout the actual writing process, writers will sense such opportunities arising for conducting meaningful performative acts of 'self-fashioning' (Hull and Katz, 2006), and will accordingly make decisions to situate the 'self' as part of certain sociocultural groups through performing their ideologies and practices. Along this line of argument, voice construction could thus be seen as exhibited in the writer's endeavour in *generating* and *questioning* opportunities for ideological expressions and discursive representations, in *choosing* the most appropriate option for expressing his/her commitments and affiliations, and in *rehearsing* or *evaluating* the persona the writer intends to construct for him/herself in front of an audience.

As exhibited by the research questions listed earlier, the main objective of this research is to find out *if* and *how* L2 creative writers' cognitive writing activities are mediated by the writers' previous creative writing experience in particular social milieus. In order to probe these questions, this study intends an organic integration of two fields of L2 studies: the often socioculturalist *L2 identity studies* with the often cognitivist *process-oriented* L2 writing research, as explained in the next section.

Method

Participants

Mai, Cai and Kota (all pseudonyms) participated in this study. All three were female Master's level students in Applied Linguistics at a UK university and had had experience in creative writing. They all come from Asian countries and intend to be EFL teachers in their respective home countries upon their completion of the Masters' programmes. The three participants' basic backgrounds are presented in Table 1 below.

Table 1. Participants' profile

	Mai	Cai	Kota
Age	Early 20's	Early 20's	40's
Nationality	Chinese	Chinese	Japanese
Overall IELTS score	7.0	7.0	6.5
Previous degree	BA in English & English Language Teaching	BA in English & English Language Teaching	BA in Commercial Science
First learned English	9 yrs. old	12 yrs. Old	12 yrs. old

Tasks and procedure

Three sessions, all conducted in English, were individually carried out with each participant in the following order.

Firstly, an interview was conducted to find out the writer's previous practices of creative writing (in L1 and/ or L2). The interview was employed as a retroactive means to tease out the L2 individual writers' particular perceptions of their creative writing experiences, in particular, their self-positioning in certain communities.

Next, two think-aloud story writing sessions were separately conducted, with one week in between. The free-topic task came before the prompted, story-continuation task. In both writing sessions, the participant composed stories in Microsoft Word while speaking out in English the thoughts instantaneously occurring in her mind. She was instructed to verbalise guesses or any idea and not to worry about grammar or sentence completion. There was some practice in think-aloud writing before the first story-writing session started. In the 30-minute think-aloud training, firstly, the participant was asked to think up a topic for the researcher (the first author) to write on for 5 minutes while thinking aloud in English. This was intended to demonstrate what think-aloud writing could be like and to address any question or uncertainty. In the second part of the training, the participant was given the opportunity to practice thinking aloud in English for 15 minutes while writing a 100-word reference letter (for the specific prompt, please refer to Appendix A). All of the participants finished the training session without any major sign of deviation from the instruction.

In the free-topic task, participants could write anything in English, autobiographical or fictional, within the genre of short story. In contrast, in the story-continuation task, a story opening was extracted from a published short story in English, Ha Jin's 'An Entrepreneur's Story' (2000, pp. 116-125). This particular story was chosen because its language and cultural content were considered to be accessible and engaging for these particular L2 readers. The participants were required to continue and complete the story in the most coherent and logical way that they could manage. For both writing tasks, a minimum length of 400 words was set up; no time limit was imposed on the writing processes; and access to dictionaries was allowed. To reduce the pressure experienced by the participants in generating ideas entirely on-the-spot while thinking aloud in the researcher's presence, each writer was given the description of the task concerned one week before the corresponding writing session. That is to say, the participants were allowed the opportunity to think about the directions of their stories in advance of the think-aloud writing sessions; nonetheless they were explicitly told not to go to the length of drafting.

Some readers might criticize the present study for imposing ‘artificial’ writing tasks and procedures on the participants instead of examining their creative writing practices in natural settings. Our rationales for doing so are: comparability, research practicality, and reliability. Firstly, the story writing tasks have to be the same for everyone for the purpose of comparison. Nevertheless, flexibility and individual variety were consciously aimed for in our design of the two story topics. Secondly, although in natural settings creative writers might be more likely to write when inspiration or emotion come to the fore, in this study, to get a consistent picture of the cognitive activities in each writing process, we saw it as necessary to ask the participants to finish each story in one sitting and to let the researcher be present throughout each writing session in case the think-aloud verbalization stopped. Thirdly, since Emig (1971)’s pioneering study, and despite some criticism of think-aloud in L2 writing, the availability and popularity of think-aloud protocols in process-oriented L2 writing research does not seem to have diminished (e.g. Armengol & Cots, 2009; Barkaoui, 2010; Murphy & Roca de Larios, 2010; Roca de Larios, Manchón, Murphy & Marín, 2008; Van Weijen, Van den Bergh, Rijlaarsdam & Sanders, 2009). The idea is that a proper training session (as explained previously) on think-aloud could be conducted to reduce, to a large extent, the influence of possible interfering variables and the ‘effects of the protocol conditions themselves on the emergence of process’ (Smagorinsky, 1994, p. 16).

Data collection methods

The interviews and the think-aloud story writing sessions were all conducted in a quiet private room and audiotaped. The audio-recordings of the interviews were later transcribed verbatim. Next, given that the focus of our think-aloud protocol analysis was to unravel writer’s decision-making and problem-solving behaviours, only those parts where the writers were not verbalizing what was being written down were transcribed verbatim for later analysis.

Data analysis methods

Firstly, we used a *cognitivist* scheme work to analyse the L2 creative writers’ think-aloud writing processes (as illustrated later) performed under the two different tasks. Subsequently, to interpret the coding results of the think-aloud protocols, we utilised our understanding of the participants’ self-positioning in particular literacy communities, based on our socioculturalist reading of the individuals’ interview comments. To be more specific, when the writer described her creative writing experience, she invariably indicated membership of at least one CoP. We focused on how the writer’s construction of this particular membership represents her

participation in specific forms of situated practices. Furthermore, from a poststructuralist perspective, we analysed why a participant preferred to conduct creative writing in her L1 or L2 in certain ways in a given situation and how such choices might relate to her sense of status. That to say, this study is not distinct from traditional cognitivist process-oriented L2 writing studies in terms of how we have coded the think-aloud protocols, but in how we have employed a sociocultural lens to consider the coding results of the think-aloud protocols. For example, do intense metacognitive writing activities of linguistic evaluation (such as ‘does this word sound good?’) primarily relate to the L2 writer’s advanced language proficiency, or perhaps to the writer’s high level of literary expertise? Or rather, do such writing behaviours derive from the enactments of certain identification (e.g. the *impressions* of a well-versed or maverick L2 writer) attempted by the writer through him/ her vigorously measuring the words to be used in specifically-intentional manners? We looked for explanations from the last viewpoint above.

Coding of the think-aloud verbalizations

Two sets of coding systems, one focusing on the types of *writing activities* and the other on the particular *aspects of writing*, were used simultaneously to analyse the think-aloud protocols.

Firstly, focusing on the *writing activities*, a coding system adapted from Wong’s (2005) framework was developed. It includes five major categories: Metacognitive, Cognitive, Affective, Rereading, and Editing. The process of examining and coding the think-aloud protocols went on simultaneously with the process of developing the coding scheme, both recursively. Descriptive subcategories (20 altogether) were then established under the above five major categories. In Appendix B, the 20 coding items under the five major categories are explained and illustrated with examples from the three participants. In each coded think-aloud protocol, the think-aloud verbalizations were segmented into think-aloud units and each unit was coded and numbered in the order of its occurrences.

Next, the think-aloud units, which fall under the Metacognitive and the Cognitive categories as coded by the 20-item coding scheme illustrated in Appendix B, were then labelled according to their association with different *aspects of writing*, i.e. language use, content, discourse & organisation, writing procedures, and the sociocultural context behind the story. Appendix C contains a sample of a segmented, coded, and numbered think-aloud protocol extracted from Mai’s think-aloud protocol for the prompted writing task.

Results and Discussion

Cognitive writing processes under the two story-writing tasks

Appendix D presents the coding results of the three writers' think-aloud protocols. Our priority is to locate the three writers' characteristic writing behaviours in such specific local task contexts, and accordingly horizontal comparisons are conducted. That is, each major or sub-coding category under one writing task is treated as the unit of examination and the percentages regarding this category respectively taken by the three writers are compared across the board. Consequently, as shown in Appendix D, the highest percentages are coloured in grey shades (to clarify the picture, only when the top percentage is above 2% does it get marked). Through such horizontal comparisons, the focus is on how *noticeable* a participant's certain writing behaviour becomes when put under comparison with its counterparts exhibited in the other participants' writing processes.

In Appendix D, we can see some distinctive writing behaviours among the three ESL creative writers across the different task conditions. Across the two tasks, Mai, among the three writers, demonstrates strong cognitive effort on the aspect of *language* in her writing processes; and her engagement in 'editing' is noteworthy. In contrast, Cai shows continuous, strong cognitive effort on the *content* of her stories; furthermore, she is not shy to reveal some 'personal voice'. Finally, Kota stands out from the three in terms of her metacognitive exertion, as well as her attention to the nuances of language and some discourse conventions of the short story genre. A normative stance taken on investigating the writing processes might ratify some of the above writing behaviours as 'expert' creative writing processes and declare some others as rather 'novice'; and consequently such evaluations might be used to promote L2 teachers' modelling of the expert writing behaviours in classroom through the form of particular creative writing task design. However, we would argue that the fundamental motivational, linguistic or literacy values offered by L2 creative writing activities lie in that such activities interact with L2 learners' *sense of selves*. This dialectic is closely associated with the students' cultural-linguistic experience and their own interpretation of it. It is hence useful to look into the above dialectic in an endeavour to achieve a more informed understanding of the L2 writers' present creative writing processes. In what follows, we will discuss Mai, Cai, and Kota's results individually, looking at some concrete examples of each writer's think-aloud utterances and reviewing the writer's previous creative writing experience.

Mai, an English-major student writer from assessment context

Compared to Cai and Kota, under both story-writing tasks (as shown in Appendix D), Mai’s writing process noticeably involves her searching for the vocabulary and phrasing needed for a particular meaning. Also, an examination of Mai’s *editing* activities—which markedly exceed those of the other writers—clearly indicates that her endeavours here are language oriented as well.

Under the free-topic task, Mai wrote about a tennis match and was seeking to recreate the ‘match point’ of a real Masters’ Cup final that she had seen. Her story concerns the decision facing a rising tennis star in the ‘match point’ of this final (whether to tell the truth or not) and suggests the similar ethical dilemma readers may encounter at some ‘deciding point’ in their lives. Throughout her writing process, Mai employed direct L1-L2 translation to retrieve particular vocabulary. Some examples of Mai’s think-aloud utterances in her free-topic writing process are shown below. The number in the left column displays the sequence of the specific think-aloud unit in the think-aloud protocol; the right column presents the major and the sub-categorisations of the think-aloud utterance concerned. Words within the “double quotation” marks indicate that these words were originally verbalized in Chinese by the writer (the English translation is provided in the following [square brackets]). Next, the parts in **block letters** highlight where ‘Editing’ happened; and the arrow ‘→’ indicates a change from the original to the edited version. Finally, words within ‘<>’ alongside the think-aloud examples are our explanations.

Table 2: Excerpt one, Mai’s think-aloud utterances, the free-topic writing task

Think-aloud Utterances	Categorisation
45. how to say “xiaoshi” [disappear]	Cognitive: Questioning—Language
46. vanished	Cognitive: Providing a solution—Language
47. now let me describe these two players	Cognitive: Goal-setting—Content
48. and may be recognized as, and was recognized as	Cognitive: Tentative attempt—Language
49. as best → as the best	Editing
50. ever in history	Rereading what has been written down
51. how to say this sentence	Cognitive: Questioning—Language
52. one of the most important tennis tournament in the year → tournaments	Editing
53. professional career	Rereading what has been written down
54. professional career since 1996 → 1995	Editing
55. there were no complaination → there were not any comments from both player	Editing
56. how to say “dui shou” [rival, opponent]	Cognitive: Questioning—Language
57. 3 seconds’ pausing <Mai was checking the word in her electronic dictionary>	Cognitive: Checking words in dictionary

Table 3: Excerpt two, Mai’s think-aloud utterances, the free-topic writing task

Think-aloud Utterances	Categorisation
70. triumph how to spell it	Cognitive: Questioning—Language
71. to be a → towon a → to win a Masters title	Editing
72. how to say “zhang sheng” [applause] in English	Cognitive: Questioning—Language
73. that’s a dream coming true → a life-time dream coming true	Editing
74. he saw it was at → saw the ball was just placed at the baseline	Editing
75. but Charlie had very strong value → Charlie knew he was a professional tennis player	Editing
76. kept silence and that unfair point to himself	Rereading what has been written down
77. it was a good → a nice shot	Editing
78. 4-6 and 1-1 on sets → 4-6 and 1-1 levels on sets	Editing
79. in the left corner of the court → he found in the left corner of the court	Editing
80. how to say “zunjing” [respectable] in English	Cognitive: Questioning—Language
81. the final result was that Alex Acasupo won → the final result was that Alex Acasupo 2 sets to 1, winning	Editing
82. in the next → in the following two years	Editing
83. but it is more a deciding point for Charlie Brown that his tennis career → that where he’s going in his tennis career	Editing

The two excerpts above demonstrate Mai’s relatively intense engagement in locating and also in editing particular language items throughout her story-creation process. Extract Two especially shows that Mai retraced what she had previously written down for grammatical correctness and phrasal improvement. However, Mai’s attention to the language issues as shown above somewhat embodies limited transformation of aesthetic or literary effect. Furthermore, the coding results in Appendix D, along with the above two excerpts, demonstrate that Mai made little attempt to generate and choose among alternative linguistic choices (i.e. *choosing the most appropriate item*). The suggestion is that although Mai was relatively concerned with language issues in her story writing processes, such mental exertion tended not to deal with the connotations of potential lexis or phrases in the process of refining linguistic expression. In the above two extracts, another noticeable phenomenon is that general words such as ‘rival’, ‘opponent’, ‘applause’, or ‘respectable’ do not come to Mai automatically, meanwhile she assuredly (i.e. showing little sign of hesitation or

self-questioning) uses several tennis references in her writing, e.g. ‘tournaments’, ‘baseline’, ‘nice shot’, ‘4-6 and 1-1 levels on sets’, ‘2 sets to 1’. Although Mai’s free-topic writing process, to a certain extent, might not articulate the voice of a proficient and literary L2 writer who possesses the ability to construct expressive, subtle, or animated language for her story, it fashions her image as the tennis fan as L2 writer, taking the initiative to re-contextualise specific tennis notions in English in the meaningful construction of her story.

Mai’s use of direct L1-L2 translation to retrieve vocabulary and her concern with linguistic correctness, especially as evidenced in her editing activities, continues in her story-continuation writing process. Meanwhile, the story-continuation task seems to have prodded Mai to consciously work on ‘content’, as revealed by the visible increases in the proportions respectively taken by her following cognitive activities dedicated to the content: i.e. *questioning*, *goal-setting*, *tentative attempts*, and *seeking information from the prompt* (see Appendix D). Continuing from the opening provided, Mai created a fictional story of how life takes an unpredictable turn for the protagonist, a poor and distressed mason, when he receives a windfall from his former cigarette-profiteering accomplice who died in prison. It is then a rags-to-riches story in which the protagonist builds up his own construction company and finally marries the girl of his dreams. An excerpt of Mai’s think-aloud utterances generated in her story-continuation process is given below. Here, she was trying to enliven her story with tangible details expressing the protagonist’s tribulations in making ends meet while attempting to get into university.

Table 4: Excerpt three, Mai’s think-aloud utterances, the story-continuation task

Think-aloud Utterances	Categorisation
11. how to say “jianzhu” [construction]	Cognitive: Questioning—Language
12. brick layer, laying bricks	Cognitive: Providing a solution-- Language
13. entering a college then Manshan and her mother would not merely see me as a poor, potential criminal with no future → then at least Manshan and her mother	Editing
14. how to spell potential	Cognitive: Questioning—Language
15. the past tense of <the word> set is the same	Metacognitive: Clarifying a situation—Language
16. how to say “tong shi” [colleague, fellow] in English	Cognitive: Questioning—Language
17. co-worker	Cognitive: Providing a solution—Language
18. I should change it to winter making him more pathetic	Cognitive: Goal-setting—Content

19. “quansuo” [crouch], use this one or that one	Cognitive: Choosing the most appropriate item—Language
20. four “ping fang mi” [square metres] how to say “ping fang mi” [square metres] in English	Cognitive: Questioning—Language
21. how to say “rong de xia” [enough space for something] in English	Cognitive: Questioning—Language
22. crouching in my four square meters room only one little bed → four square meters room where only one little bed	Editing
23. squeeze what’s the spelling	Cognitive: Questioning—Language
24. now think what to write next	Metacognitive: Goal-setting on writing procedures
25. then I had no time no I shouldn’t write this	Metacognitive: Evaluating what had been written down—Content
26. I should say he worked in the day and study at night thus more poor	Cognitive: Goal-setting—Content
27. so the only so, at the same time, I had to continue my work at the daytime because that’s my only way for a living	Rereading what has been written down
28. instead of chatting with my friends before → chatting with friends before	Editing
29. always skipped dinner	Rereading what has been written down
30. now let me see how many words already	Metacognitive: Checking word count
31. I have only a couple of hours to sleep	Rereading what has been written down
32. now I need a transitional sentence	Metacognitive: Goal-setting on writing procedures
33. but my study still couldn’t satisfy me → but the progress of my study still couldn’t satisfy me	Editing
34. didn’t understand chemistry, didn’t understand chemistry either	Rereading what has been written down
35. the only subject I had → the only subject I did well was physics	Editing
36. another transitional sentence	Metacognitive: Goal-setting on writing procedures
37. I was quite how to say it	Cognitive: Questioning—Content
38. quite surprised	Cognitive: Tentative attempt—Content
39. first say I was scared	Cognitive: Goal-setting—Content

Compared to her free-topic writing process, when writing from a prescribed story opening, Mai seems to be more consciously working on the content, enhancing her depiction of the frustrated protagonist struggling for survival, without diminishing her effort to phrase with

suitable language. In addition, Mai's story-continuation writing process witnesses a rather conspicuous increase in her metacognitive performances of *goal-setting on writing procedures* (from 1.2% to 7.9%) and *checking word count* (from zero to 3.2%). For example, Excerpt Three above reflects that the compensatory writing behaviours, i.e. *re-reading* and *editing* activities, are fortified by some sense of strategic navigation, as revealed in Mai's regulation of her writing procedures, e.g. when to put in a 'transitional sentence', and word-count monitoring. However, Mai might not identify comfortably with the above changes in her story-continuation writing process. Before she started writing, the researcher inquired about her preparation for this task. Mai indicated that she had been struggling with plot development, which led to considerable frustration and self-denials on her part, even to the point of asking for help from the researcher. The implication is that Mai was not motivated by the constraint imposed by the story-continuation task to conduct meaningful performative acts of self-representation—be they linguistic or ideological—to the extent of feeling empowered by the persona she constructs for herself in front of a reader, e.g. the image of a well-informed tennis fan she previously associated with herself in the free-topic task.

A sociocultural perspective leads us to speculate that Mai's focus on the denotations of the language and her ideational manipulation under constraint might be related to her L2 creative writing 'habitus' formed during her previous L2 story writing experience in her English-major language classroom, which is reviewed below.

Mai's creative writing experience mostly happened in her English-major degree course 'Intensive Reading' during her undergraduate study in China. Mai recalled that they would study a literary text and 'discuss the beautiful words, literature words' (quoted from the interview) and examine literary devices such as point-of-view and use of metaphor. After this, students would be asked to write a story in English using the same literary techniques. The teacher would then assess all the stories and select the best one to be read out in a following class. The grade for each English story writing assignment would go into the student's final grade for this course; and hence the students were driven to align with the literacy values ratified by the L2 teacher. Mai perceived herself as 'adequate' in performing these L2 story writing tasks. However, she also admitted she was often unenthusiastic about creative writing, either in English or Chinese. Her self-initiated creative writing practices were only occasional, and mainly in the form of diary writing about interpersonal relationships and personal feelings.

From the above description we could see that Mai's story writing practices, primarily conducted in English, had been mostly normative and assessment-oriented, rather than for

self-expressive or improvisational needs. Mai was not motivated to negotiate a personal and creative space for her L2 stories under the demands of her English degree course classroom despite her regular engagement in such literacy activities. Clark and Ivanič (1997) stated that some ‘juxtapositions’ of the ‘social action’ elements, e.g. writer’s interests, social positioning, the writing tasks he/she faces, the social values and social structure surrounding him/her, ‘cause a person to write...in a particular way’ (p. 64). Similarly, Ivanič (2006) referred to the above elements as the ‘co-emerging factors’ which define the ‘texture’ of any text (p. 8). As described above, L2 story writing was employed by Mai’s English language teacher as an important mediation means, not only to let students digest and practice the newly-acquired linguistic and literary knowledge in writing, but also to assess their educational achievement. Mai’s attention to the language of her stories indexes her as a dutiful and careful L2 learner and meanwhile might also be related to her awareness of a judgmental audience whose interests possibly privileged linguistic accuracy over ideational authorship or innovation. Mai’s case raises the question of how we could appropriately design classroom creative writing materials and evaluate students’ work so as to make L2 students feel confident and enthused to transcend their comfort zone of L2 usage and make original personal and aesthetic statements.

Cai - An enthusiastic writer in social media contexts

In sharp contrast to Mai, Cai’s two story-writing processes are fairly ideationally-oriented. Under both tasks, before her writing started, when asked about her advance planning, Cai commented that she would rely on the intuitive narrative flow generated in the actual writing process. Firstly, for the free-topic task, Cai indicated her intention to create a story about a ‘time machine’, as she had recently been reading about this subject and became interested in it. Cai’s free-topic writing process demonstrates a substantial engagement in the cognitive activity of *goal-setting on content* (an enormous 51.6%; see Appendix D). Cai navigated the development of her story according to what immediately occurred in her mind. Her free-topic writing tells the story of how a little boy, Xiao Ming, played with his Dad’s latest invention, a time machine, and got lost in a pre-historic forest, from where Xiao Ming eventually drove the time machine back with his dad’s help. An excerpt of Cai’s highly improvisational free-topic story writing process is shown below.

Table 5: Excerpt four, Cai’s think-aloud utterances, the free-topic writing task

Think-aloud Utterances	Categorisation
16. now I’ll write Xiao Ming is a boy he is very interested in science and likes to invent things	Cognitive: Goal-setting—Content
17. now his dad is working on some machine some machine which could bring bring people to back to the past	Cognitive: Goal-setting—Content
18. now time machine is brought in	Metacognitive: Evaluating a situation—Content
19. and then what’s its connection with Xiaoming	Cognitive: Questioning—Content
20. Xiao Ming should be very curious about it but his Dad wouldn’t allow him to have a look at it	Cognitive: Goal-setting—Content
21. it’s really Chinglish	Metacognitive: Evaluating what had been written down—Language
22. laboratory should be “shiyanshi” [laboratory]	Cognitive: Direct translating
23. there is something in the middle covered by curtain	Cognitive: Goal-setting—Content
24. what’s “mu bu” [curtain] in English	Cognitive: Questioning—Language
25. this curtain is one metre high no two metres high	Cognitive: Goal-setting—Content
26. he would he would “jiediao” [remove] the curtain	Cognitive: Goal-setting—Content
27. how do you say “jiediao” [remove/take off]	Cognitive: Questioning—Language
28. this should be before he just found the machine, all should be in the past tense	Metacognitive: Evaluating a situation—Discourse
29. change change change	Editing
30. his dad wasn’t here now so he would play with this time machine this this wonderful,	Cognitive: Goal-setting—Content
31. so Xiao Ming would use this time machine now to go back to the past	Cognitive: Goal-setting—Content
32. should say why he could go back to the past	Cognitive: Goal-setting—Content
33. how this time machine was to be used	Cognitive: Questioning—Content
34. how this time machine should take him back to the past	Cognitive: Questioning—Content
35. so this time machine should look like a chair	Cognitive: Goal-setting—Content
36. 2 metres high Xiao Ming guessed it could be the time machine → 2 metres high it looks like a big iron chair	Editing
37. big iron chair with some buttons on it 4 buttons	Cognitive: Goal-setting—Content
38. Xiao Ming thought this should be it then his attention should be drawn so he didn’t notice	Cognitive: Goal-setting—Content
39. Xiaoming sat on the chair	Cognitive: Goal-setting—Content
40. now that he pushed the button he would go back to the past	Cognitive: Goal-setting—Content

It could be seen from above that Cai’s planning on her story’s content is emergent, purposeful and at a relatively local level. However, our inspection of the above excerpt does not suggest much conscious effort made by Cai to align with specific discursual conventions. That is, we could not find much reference made by her to the ideological or literary possibilities for representing her story in a particular intended way.

The story-continuation task forces Cai to analyse the thematic and rhetorical demands of the writing task, as particularly shown in the dramatic increase in the proportion of her metacognitive activities, from 15.6% to 34.1%. This upsurge in Cai’s metacognitive exertion in the story-continuation task was caused by the conspicuous emergence of her *evaluating the story’s sociocultural context* (from 0 to 11.4%), of her *clarifying a situation* (from 0 to 6.8%), and of her *making comments on the prompt* (from 0 to 9.1%). In her fictional story-continuation writing, similar to Mai, Cai was also seeking to deliver a rags-to-riches story. Her story recounts how the protagonist reunited with his ex-criminal, opportunistic business partner and they successfully built up a chain of tobacco stores against the background of China’s opening-up policy and economic reform. Some examples of Cai’s think-aloud utterances in her story-continuation writing process are shown below.

Table 6: Excerpt five, Cai’s think-aloud utterances, the story-continuation task

Think-aloud Utterances	Categorisation
1. this guy because “wen ge” [Cultural Revolution] had just end so he would write something about that	Metacognitive: Comments drawn on the prompt
2. what is “wen ge” [Cultural Revolution] <Cai was scanning the prompt>	Cognitive: Seeking information from the prompt—Language
3. Cultural Revolution	Cognitive: Providing a solution—Language
4. after the Cultural Revolution everybody went to every student could go to all the young people could go to colleges	Metacognitive: Evaluating a situation—Sociocultural context
5. this should be written in the first person	Metacognitive: Clarifying a situation—Discourse
6. then he should think out a way to go to university	Cognitive: Goal-setting—Content
7. my wife started to go to night school	Rereading what has been written down
8. study by myself how to study by myself	Cognitive: Questioning—Content
9. my wife started to go to night school it seemed that if I still wanted to marry her I must learn more and earn more the only solution I could find out was to study by myself for not being able to take the entrance exam	Rereading what has been written down

10. so difficult to write this story	Affective: Personal voice
11. what subjects should he study	Cognitive: Questioning—Content
12. I am thinking what are the subjects	Metacognitive: Clarifying a situation—Writing procedures
13. go to school everyday what to learn	Cognitive: Questioning—Content
14. learn Math and also Economy and English	Cognitive: Providing a solution—Content
15. these years everybody learns English	Metacognitive: Evaluating a situation — Sociocultural context
16. this guy should still be a mason then	Metacognitive: Comments drawn on the prompt
17. so difficult to write	Affective: Personal voice
18. he was caught before so he shouldn't do illegal business	Metacognitive: Comments drawn on the prompt
19. “daomai” [profiteering] “daomai” is trade	Cognitive: Direct translating

Cai’s metacognitive attention indicates her enacting her knowledge of relevant themes from the historical period of the Cultural Revolution so as to correspond to the concept implied by the prompt and to construct her story accordingly. For example, the above excerpt provides some evidence that Cai was trying to re-accentuate some typical social discourses in China, such as marketization (see units 14, 18-19), materialism of marriage (unit 9), the coupling of education and social status (see units 4, 9 and 11 to 13), and the English-language-learning frenzy (units 14 and 15). Next, regarding Cai’s story-continuation writing process, Appendix D displays a plunge in her Cognitive units (from 78.1% to 43.2%), which is noticeably related to the distinct fall in the subcategory of *goal-setting on content* (from 51.6% to 11.4%). Meanwhile, Appendix D shows a remarkable increase from zero to 13.6% in the proportion of Cai’s *re-reading* activities. The above results seem to suggest that Cai had changed from spontaneously setting goals on content step by step to employing *re-reading* as a ‘springboard’ to generate the narrative flow. However, her idea-generating effort in the story-continuation writing process seemed to have put strain on her, as evidenced by Cai’s recurrent negative affective *personal voice* shown above in Excerpt Five.

Different from Mai, Cai had significant experience in self-initiated creative writing practices (partly in Chinese) and her writing also enjoyed audiences. Cai’s previous creative writing activities flourished in the community of F1 motor racing fans in China and also in the social group of active, self-expressive bloggers. The suggestion is that her creative writing practices are characterised by ‘performative moments’ which situate her in a particular group with a sense of solidarity (Hull and Katz, 2006), and the alleviation of her ‘sense of self as autonomous or isolated’ (ibid, p. 47).

Firstly, Cai is particularly passionate about Formula One motor racing and the chief moderator of one of the most popular online sports forums in China. As she told the researcher with some pride, her expert status as an F1 fan in China even led to her introduction to F1 legend Michael Schumacher. For example, her identity as an F1 aficionado was declared to other community members through nicknaming herself ‘Schumacher’s little sister’ on this sports forum. There, Cai wrote extensively (all in Chinese) on her personal responses to every single F1 race Schumacher participated in, as well as Schumacher’s public appearance and life off the racing track. From the above description it could be seen that the considerable ‘capital’ Cai possessed in the community of F1 fans in China, e.g. her advantageous social positioning and power as the chief moderator, her extensive knowledge of F1, and her access to valuable resources in this field, had a mutually facilitative relation with her creative writing activities in this context.

Secondly, Cai frequently updated her personal blog (made public) which comprised poems, narrative accounts of travel, witticisms, expressive pieces and various writing on music, books, soap opera, and F1 (all original). The blog writing varied drastically in length and was composed in Chinese or English (depending, as she said, ‘on her mood’). In her personal blog writing, Cai’s agentic self was constructed through giving meaning to her lived experiences through a variety of symbolic mediators, e.g. multiple creative writing genres, L1 and L2 languages, visual (TV and pictures), audio (music), literary (literature) and life (personal experience) resources. Such creative literacy practices in turn fuelled her sense of self as a versatile person with a variety of interests and a colourful life.

In contrast, the two task conditions in this research do not present Cai with those social contexts which facilitate and motivate her performative acts. In particular, there was no conceivable audience to whom her identity declaration could be meaningfully and effectively enacted and through whom her social positioning and consequently her ‘capital’ could be reconstructed. Writers’ affect, implied in Clark and Ivanič’s (1997) framework, influences the length writers would go to in order to establish a particular intensity of self-representation and authorial stance in their texts. The affect which describes Cai’s creative writing ‘habitus’ is possibly primarily nurtured in the knowledge-expertise valued community of Chinese F1 motor racing fans (where her privileged status was recognized) and in her value-laden and carefree blog writing context. In Bourdieu’s (1991b) terms, individuals’ symbolic capital depends on the exact social field in which they are operating.

The above might be related to the indication that in the present two story-writing processes Cai, compared to the other two writers, palpably focused on generating the content. In the story-continuation writing task, the opportunity for performing particular self-identification through expressing certain interest or values in her writing was even less available to Cai than in the free writing. She appeared to lack motivation for this writing, as perhaps revealed by her increasing occurrences of negative affective utterances, forced monitoring of the concepts delivered by the story opening, and a marked emergence of relying on what had been written down to generate ideas.

Cai's case particularly suggests that it is not always the case that L2 creative literacy activities are primarily practiced by the students for the purposes of language or writing development, although that may be the primary classroom imperative; notably, such creative writing also allows the individual writers to manage a sort of ontological security among their multiple positioning in social relations. This is achieved by the L2 creative writers through instantiating certain images or scenarios that they intend to associate with themselves in their writing. Such voluntary acts of creative writing could lead to identity reproductions or transformations.

Kota—the empowered L2 learner writer

In comparison to the other two participants, Kota constantly demonstrates distinctly more metacognitive attention to *evaluating* plot development, narrative structure, specific wording, or the avoidance of repetition; and cognitively she also shows distinctly more attention to *choosing the most appropriate* option, be it ideational, linguistic, or rhetorical, and to *verbally rehearsing* potential choices. In the free-topic task, Kota reconstructed one of her life stories in a literary manner. In the story-continuation task, despite a certain loss of control over the story's content, Kota attended to imbuing the story with her own ideologies and L2 idiolect.

Firstly, among the three writers, Kota's metacognitive utterances most visibly shifted between local '[c]ontrol activities (e.g. 'Does that sound good?')' (Zimmermann, 2000, p. 84) to more global evaluation and self-regulation, e.g. issues concerning the comprehensibility, appeal, and creativity of her story, as shown in the following excerpts of her think-aloud protocols in the two tasks

Table 7: Excerpt six, Kota’s think-aloud utterances, the free-topic writing task

Think-aloud Utterances	Categorisation
61. emm not interesting	Metacognitive: Evaluating what had been written down—Content
62. it is the time that Akiko have to decide her research which is one of the subjects in the university. She decided to write about teaching methods in a primary school and had a chance to observe some classrooms	Rereading what has been written down
63. there is a problem the story is like not a creative writing but unconditional writing	Metacognitive: Evaluating what had been written down—Discourse
64. I have to change just these sentences, explain explain the scene	Cognitive: Goal-setting—Content
65. I don’t like this one	Metacognitive: Evaluating what had been written down—Discourse
66. I want to have a conversation	Cognitive: Goal-setting—Discourse

Table 8: Excerpt seven, Kota’s think-aloud utterances, the story - continuation task

Think-aloud Utterances	Categorisation
180. the man felt a pain, or I could write he saw a sharp knife in the man’s hand with the light of the car park	Cognitive: Choosing the most appropriate item - Content
181. the description is too direct too direct	Metacognitive: Evaluating a situation - Discourse
182. ok no knife he saw something in the man’s hand but he saw something in the man sharp he saw something sharp right	Cognitive: Tentative attempt—Content

The above excerpts show Kota’s awareness of, and seeming willingness to abide by, certain well-endorsed discourse conventions associated with story writing, i.e. exercising aesthetic control in expression or plot design rather than being over-expressive in spontaneous ‘venting-out’ of feelings (Table 7), and attempting subtlety in literary descriptions (Table 8).

Secondly, as indicated by the coding results in Appendix D, under both tasks, Kota meticulously engaged in *choosing the most appropriate linguistic item* in the process of composition. Such activities on her part were not restricted to the ‘surface features of the language’ such as the ‘application of grammatical rules, and verifications of spellings’ (Cumming, 1989, p. 117), but also considered semantic nuances and aesthetic qualities of the language, as shown in the following examples:

Table 9: Examples of Kota’s think-aloud utterances of choosing the most appropriate linguistic item, in free-topic and story-continuation tasks

56. had no interest unconcerned is not concerned about (Free-topic task)
86. teacher partner teacher sounds strange partner also sounds strange teacher ok reading teacher (Free-topic task)
128. cute beautiful kissable charming charming lovely desirable, too formal, charming charming I wanna have, more, charming it’s ok charming (Free-topic task)
51. I said I answered I talked ok I said (Story-continuation task)
59. but there is dangerous dangerous alarm in my mind, the alarm somewhere whispered in my ears which one is better (Story-continuation task)
67. guts brave guts plenty of guts (Story-continuation task)
89. my money my savings my money my nest (Story-continuation task)

The above think-aloud utterances (Table 9) position Kota as a competent ESL user who values and discriminates between aesthetic qualities in language. For example, we can see that in the third example (unit 128, free-topic) a series of synonyms all expressing the meaning of ‘attractiveness’ were put out for comparison and selection. The desire-statement ‘I wanna have, more’ signals Kota taking control of her own search for the most apt English word to deliver a particular intended effect (though what it is remains unstated). This, in turn, constructs her linguistic identity as an agentive ESL learner who has the power to retrieve and deploy English lexis to engage in creative meaning-making.

Thirdly, under both tasks, Kota’s cognitive utterances concerning *tentative attempts* also consistently took distinctly larger percentages than the counterparts in the other two writers’ protocols (see Appendix D). For illustration, two excerpts of Kota’s think-aloud utterances, where her actions of *tentative attempts* are embedded, are given below:

Table 10: Excerpt eight, Kota’s think-aloud utterances, The free-topic writing task

Think-aloud Utterances	Categorisation
46. person student pupil children student person people not people student children oh no student	Cognitive: Choosing the most appropriate item—Language
47. oh the introduction is too long too long, is it OK OK	Metacognitive: Evaluating what had been written down—Discourse
48. I am gonna write as best as possible	Metacognitive: Goal-setting on writing procedures
49. cute not cute round shining round eyes	Cognitive: Tentative attempt—Language
50. is it not suitable for child	Metacognitive: Evaluating a situation—Language

Table 11: Excerpt nine, Kota’s think-aloud utterances, the story-continuation task

Think-aloud Utterances	Categorisation
197. I have to say who killed him yep	Cognitive: Goal-setting—Content
198. this man this man golden necklace I said tall man yeah a tall man walked toward him coming	Cognitive: Tentative attempt—Content
199. yeah it’s one hint he is that guy	Metacognitive: Clarifying what had been written down—Content

As can be seen above, Kota’s verbal rehearsals of particular descriptions in her stories reveal her as an explorative creative writer who deliberated over linguistic (Table 10) and ideational (Table 11) try-outs. As shown in Table 11, Kota’s tentative attempt concerning the description of a particular scene in her story shows her trying to stimulate an imaginative and vivid response in her reader, e.g. ‘this man *golden necklace*’, ‘I said *tall man* yeah a tall man’ (Unit 198).

Some cognitivist L2 writing researchers might go to the length of correlating Kota’s writing behaviours with the quality of her texts in order to prove that she is an expert writer (for such an approach, see Rijlaarsdam & Van den Bergh, 2006). Notwithstanding subjective issues of literary quality in the product, we would argue that the above writing behaviours actually also signify, in linguistic and discursal ways, powerful negotiations and declarations made by Kota of her L2 and writer identities, i.e. an agentive L2 creative writer and a capable English language user. In order to identify the various social and cultural practices behind the concrete features shown in Kota’s writing processes, the writer’s previous language and writing experience need to be examined.

As described by Kota in the interview, she had not gained enjoyment or great success in learning English during her formal education. However, she had become very enthusiastic about short story writing in English after she first participated in a creative writing module offered by the UK university where she was doing her Masters’ degree. Before participating in our research, she had already produced a portfolio of short stories exclusively written in English. It is worth speculating here that Kota’s story writer identity was constructed or enabled by the emancipative power she had found in L2 story writing for realizing and performing a competent, legitimate and agentive L2 self in a way that learning English in school had not allowed her. Most of Kota’s stories were based on personal experiences. She tapped into her life experiences, along with what she had learned in the creative writing module, as significant symbolic resources, compensating for her perceived lack of formal L2 linguistic competence, to

engage in ‘legitimate peripheral participation’ (Lave and Wenger, 1991) in this local creative writing community. Through such literacy practices, her past sense of self as a somehow ineffective L2 learner and L2 writer was effectively reconstructed and replaced by the self-identity as a blossoming L2 story writer.

Conclusions and implications

The three L2 creative writers, with similar English proficiency, demonstrate diverse writing behaviours as enacted in their present story-writing processes. A tentative conclusion could be drawn that the three writers’ idiosyncratic writing processes are related to their previous creative writing experiences which act as a socioculturally formed evaluative lens through which they interpret and perform the current literacy activities, e.g. Mai’s attention to words, spelling and grammar, Cai’s ideationally-oriented writing processes, and Kota’s comprehensive metacognitive attention. The results of this study suggest certain directions for theory development in process-oriented L2 writing research as well as in L2 creative writing research.

Firstly, regarding process-oriented L2 writing research, findings from this study support that writers’ emerging mental activities, situated in and mediated by an immediate writing context, are simultaneously the writers’ self-representational moves. Therefore, in response to the traditional cognitivist view which supports a hierarchy of the efficiency or effectiveness of different cognitive writing behaviours, one emergent issue from the current investigation is that we need to problematize the notion of a universal or ‘model/expert’ writing process in creative writing, academic writing or any other type of discourse, as there could be an array of different writing processes speaking distinctive writing habitus. This notion holds pedagogical implications for L2 creative writing studies, as discussed next.

In classroom-based L2 creative writing projects, some teacher researchers are keen to inject certain forms of constraint into the tasks (e.g. poem or drama writing) so as to guide their students to perform within their ‘zones of proximal development’ (ZPD) (Vygotsky, 1978). On the other hand, especially in ESL classrooms, there have been pedagogical and sometimes ethnic advocacy for giving freedom to learners in L2 creative writing so as to put a premium on the L2 learners’ sociocultural heritage and personal knowledge. In an effort to establish an instructional L2 creative writing setting which allows for teacher guidance and ‘collaboration with more capable peers’ (ibid, p. 86), teachers often implement some collective creative writing procedures, e.g. group brainstorming sessions, group writing projects (e.g. Elgar, 2002; Ensslin, 2006). However, findings from the present research suggest that L2 creative writers’

cognitive writing processes, at a present moment, are meaningfully idiosyncratic; furthermore, the three ESL creative writers tuned their cognitive writing processes differently in reaction to the changing of tasks from the free-topic writing to the story-continuation writing. The implication is that L2 teachers might profitably incorporate a mixture of different types of creative writing activities in their classroom and also develop more sensitivity to the learners' varying responses to the particular activities, e.g. the students enthusiastically playing with the language or their imagination, or the students enjoying collective/individual or fairly structured/improvisational writing processes.

To sum up, when L2 teachers implement a particular creative writing activity (e.g. story writing or poetry writing) in the classroom, they need to expect and indeed welcome different creative processes and thus identity-actuation measures exhibited by the individual students. Socioculturally oriented investigations of L2 creative writers' cognitive writing processes such as the present study may inform our knowledge and appreciation of how L2 creative writing can be employed, not only as a language learning activity, but also as a valuable self-empowering tool for learners. As we have seen in the study, engagement in creative writing activities offers language learners a medium for negotiating a particular self-image and social positioning and developing the positive self-esteem which nurtures confidence and motivation.

References

- Armengol, L. & Cots, J. (2009). Attention processes observed in think-aloud protocols: Two multilingual informants writing in two languages. *Language Awareness*, 18, 259–276.
- Bakhtin, M. M. (1981). *The dialogic imagination: Four essays by M. M. Bakhtin*. (C. Emerson & M. Holquist, Trans., M. Holquist, Ed.). Austin: University of Texas Press.
- Barkaoui, K. (2010). Variability in ESL essay rating processes: The role of the rating scale and rater experience. *Language Assessment Quarterly*, 7(1), 54–74.
- Bourdieu, P. (1991a). Chapter 1: The production and reproduction of legitimate language. In G. Raymond & M. Adamson (Trans.), J. B. Thompson (Ed.) *Language and symbolic power* (pp. 43-65). Cambridge: Polity Press.
- Bourdieu, P. (1991b). Chapter 7: On symbolic power. In G. Raymond & M. Adamson (Trans.), J. B. Thompson (Ed.) *Language and symbolic power* (pp.163-170). Cambridge: Polity Press.

- Bruffee, K. A. (1986). Social construction, language, and the authority of knowledge: A bibliographical essay. *College English*, 48, 773-790.
- Chamcharatsri, P. (2009). Negotiating identity from auto-ethnography: Second language writers' perspectives. *Asian EFL Journal*, 38. Retrieved January 10, 2013 from http://www.asian-efl-journal.com/PTA/pta_August_2009_pc.php.
- Clark, R. & Ivanič, R. (1997). *The politics of writing*. London: Routledge.
- Cook, G. (1997). Language play, language learning. *ELT Journal*, 51 (3), 224-231.
- Crene, P. & Hunt, C. (2002). Creative Participation in the Essay Writing Process. *Arts & Humanities in Higher Education*, 1(2), 145-166.
- Cumming, A. (1989). Writing expertise and second language proficiency. *Language Learning*, 39, 81-141.
- Cumming, A. (1990). Metalinguistic and ideational thinking in second language composing. *Written Communication*, 7(4), 482-511.
- Duff, A. & Maley, A. (2007). *Literature*. Oxford: Oxford University Press.
- Elgar, A. G. (2002). Student playwriting for language development. *ELT Journal*, 56(1), 22-28.
- Emig, J. (1971). *The composing processes of twelfth graders*. Urbana, Illinois: National Council of Teachers of English.
- Ensslin, A. (2006). Literary hypertext in the foreign language classroom: A case study report. *Language Learning Journal*, 33, 13-21.
- Fairclough, N. (2003). *Analysing discourse*. London: Routledge.
- Hanauer, D. I. (2010). *Poetry as research: Exploring second language poetry writing*. Amsterdam: John Benjamins Publishing Co.
- Haneda, M. (2005). Investigating in foreign-language writing: A study of two multicultural learners. *Journal of Language, Identity, and Education*, 4(4), 269-290.
- Hull, G. A. & Katz, M. (2006). Crafting an agentive self: Case studies of digital storytelling. *Research in the Teaching of English*, 41(1), 43-81.
- Hyland, K. & Guinda, C. S. (Eds.) (2012). *Stance and voice in academic discourse*. Basingstoke, UK: Palgrave Macmillan.
- Ivanič, R. (2006). Language, learning and identification. In, R. Kiely, P. Rea-Dickens, H. Woodfield & G. Clibbon (Eds.) *Language, culture and identity in applied linguistics* (pp. 7-29). London: Equinox.
- Jacobs, C. L. (2008). Long-term English learners writing their stories. *English Journal*, 97(6), 87-91.
- Jin, H. (2000). *The bridegroom*. London: Vintage.

- Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.
- Maguire, M. H. & Graves, B. (2001). Speaking personalities in primary school children's L2 writing. *TESOL Quarterly*, 35(4), 561-593.
- Maley, A. (2009). Creative writing for language learners (and teachers). *Teaching English - British Council & BBC*. Retrieved January 10, 2013 from <http://www.teachingenglish.org.uk/articles/creative-writing-language-learners-teachers>.
- Maley, A. (2012). Creative writing for students and teachers. *Humanising Language Teaching*, 14(3). Retrieved January 10, 2013 from <http://www.hltmag.co.uk/jun12/mart01.htm>
- Maley, A. & Duff, A. (1994). *The inward ear: Poetry in the language classroom*. Cambridge: Cambridge University Press.
- Maley, A. & Duff, A. (2005). *Drama techniques: A resource book of communication activities for language teachers*. Cambridge: Cambridge University Press.
- Maley, A. & Moulding, S. (1985). *Poem into poem*. Cambridge: Cambridge University Press.
- Maley, A. & Mukundan, J. (Eds.). (2011a). *Asian short stories for young readers*. Petaling Jaya: Pearson Malaysia.
- Maley, A. & Mukundan, J. (Eds.). (2011 b). *Asian poems for young readers*. Petaling Jaya: Pearson Malaysia.
- Matsuda, P. K. (2001). Voice in Japanese written discourse: Implication for second language writing. *Journal of Second Language Writing*, 10, 35-53.
- Matsuda, P. K. & Jeffery, J. V. (2012). Voice in student essays. In K. Hyland and C. S. Guinda (Eds.), *Stance and voice in academic discourse* (pp. 151-156). Basingstoke, UK: Palgrave Macmillan.
- Mukundan, J. (Ed.). (2006). *Creative writing in EFL/ESL classrooms II*. Petaling Jaya: Pearson Longman Malaysia.
- Murphy, L. & Roca de Larios, J. (2010). Searching for words: One strategic use of the mother tongue by advanced Spanish EFL writers. *Journal of Second Language Writing*, 19, 61-81.
- Norton, B. (1995). Social identity, investment, and language learning. *TESOL Quarterly*, 29(1), 9-31.
- Norton, B. (1997). Language, identity, and the ownership of English. *TESOL Quarterly*, 31(3), 409-429.
- Norton, B. (2000). *Identity and language learning: Gender, ethnicity, and educational change*. Essex, England: Longman.

- Norton, B. & Toohey, K. (2001). Changing perspectives on good language learners. *TESOL Quarterly*, 35(2), 307-322.
- Ouellette, M. A. (2008). Weaving strands of writer identity: Self as author and the NNES “plagiarist”. *Journal of Second Language Writing*, 17, 255–273.
- Pavlenko, A. & Lantolf, J. P. (2000). Second language learning as participation and the (re)construction of selves. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 155-177). Oxford: Oxford University Press.
- Pavlenko, A. (2004). ‘The making of an American’: Negotiation of identities at the turn of the Twentieth Century. In A. Pavlenko & A. Blackledge (Eds.), *Negotiation of Identities in Multilingual Contexts* (pp. 34-67). Clevedon: Multilingual Matters.
- Prior, P. (2001). Voices in text, mind, and society: Sociohistoric accounts of discourse acquisition and use. *Journal of Second Language Writing*, 10, 55-81.
- Prior, P. (2006). A sociocultural theory of writing. In C. A. Macarthur, S. Graham & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 54-66). New York: The Guilford Press.
- Reay, D. (2004) ‘It’s all becoming a habitus’: Beyond the habitual use of habitus in educational research. *British Journal of Sociology of Education*, 25 (4), 431-444.
- Rijlaarsdam, G. & Van den Bergh, H. (2006). Writing process theory: A functional dynamic approach. In C. A. Macarthur, S. Graham & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 41-53). New York: The Guilford Press.
- Roca de Larios, J., Manchón, R., Murphy, L. & Marín, J. (2008). The foreign language writer’s strategic behaviour in the allocation of time to writing processes. *Journal of Second Language Writing*, 17(1), 30-47.
- Rosi Sole, C. (2004). Autobiographical accounts of L2 identity construction in Chicano literature. *Language and Intercultural Communication*, 4(4), 229-241.
- Rubio, F. (Ed.). (2007). *Self-esteem and foreign language learning*. Newcastle: Cambridge Scholars Publishing.
- Severino, C., Gilchrist, M. & Rainey, E. (2010). Second Language Writers Inventing Identities through Creative Work and Performance. In M. Cox, J. Jordan, C. Ortmeier-Hooper & G. G. Schwartz (Eds.), *Reinventing identities in second language writing* (pp. 174-194). Urbana: National Council of Teachers of English.
- Smagorinsky, P. (1994). Think-aloud protocol analysis: Beyond the black box. In P. Smagorinsky (Ed.), *Speaking about writing: Reflections on research methodology* (pp. 3–19). London: Sage.

- Tarnopolsky, O. (2005). Creative EFL writing as a means of intensifying English writing skill acquisition: A Ukrainian experience. *TESL Canada Journal*, 23(1), 76-88.
- Teaching English — British Council & BBC*. (2013). Retrieved January 10, 2013 from <http://www.teachingenglish.org.uk/>.
- Tin, T. B. (Ed.). (2004). *Creative writing in EFL/ESL classrooms*. Serdang: Universiti Putera Malaysia Press.
- Tin, T. B. (2007). A report on a collaborative creative writing endeavour: Spreading the spirit of creativity through creative writing workshops in the Asia-Pacific region. *Humanising Language Teaching*, 9(2). Retrieved January 10, 2013 from <http://www.hltmag.co.uk/mar07/mart05.htm>.
- Tin, T. B. (2011). *Applied Linguistics*, 32(2), 215-235.
- Tin, T. B. (2012). Freedom, constraints and creativity in language learning tasks: New task features. *Journal of Innovation in Language Learning and Teaching*, 6(2), 177-186.
- Ushioda, E. (2009). A person-in-context relational view of emergent motivation, self and identity. In Z. Dörnyei & E. Ushioda (Eds.), *Motivation, Language Identity and the L2 Self* (pp. 215-228). Bristol: Multilingual Matters.
- Ushioda, E. & Dörnyei, Z. (2012). Motivation. In S. Gass & A. Mackey (Eds.), *The Routledge Handbook of Second Language Acquisition* (pp. 396 – 409). Abingdon: Routledge.
- Van Weijen, D., Van den Bergh, H., Rijlaarsdam, G. & Sanders, T. (2009). L1 use during L2 writing: An empirical study of a complex phenomenon. *Journal of Second Language Writing*, 18, 235–250.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge: Cambridge University Press.
- Wong, A. T. Y. (2005). Writers' mental representations of the intended audience and of the rhetorical purpose for writing and the strategies that they employed when they composed. *System*, 33(1), 29-47.
- Yi, Y. (2007). Engaging literary: A biliterate student's composing practices beyond school. *Journal of Second Language Writing*, 16, 23-39.
- Yi, Y. (2010). Adolescent multilingual writers' transitions across in- and out-of-school writing contexts. *Journal of Second Language Writing*, 19(1), 17-32.
- Zimmermann, R. (2000). L2 writing: Subprocesses, a model of formulating and empirical findings. *Learning and Instruction*, 10, 73-99.

Appendix A: The task for the participants' think-aloud training

Write a 100-word reference letter for your friend to work with foreign teenagers. Describe his or her character and why you recommend him or her. You have 15 minutes to do this task. Please use this task as a chance to practice think-aloud writing. What you write here will not be analysed or evaluated.

Appendix B: The think-aloud coding scheme and examples

1. Metacognitive:

1) Evaluating a situation

'...yep I think this story should use past tense...' (Mai)

2) Clarifying a situation

'...yes I haven't thought about how to begin...' (Mai)

3) Evaluating what had been written down

'...it's really chinglish...' (Cai)

4) Clarifying what had been written down

'...yeah it's one hint...' (Kota)

5) Self-assessment (relatively objective)

'...this is a problem I always have vocabulary grammar problem...' (Kota)

6) Goal-setting on writing procedure or style

'...now I need a transitional sentence...' (Writing procedure, Mai)

'...ok ok must be interesting...' (Style, Kota)

7) Conclusions drawn/comments given based on the prompt of the story opening

'...this protagonist had to work very hard in order to marry that girl...' (Mai)

8) Checking word counts

'...now let me see how many words already...' (Mai)

2. Cognitive:

9) Questioning:

(Questionings which display the functions of evaluation are not included here; instead they are put under the Metacognitive category)

'...what's this boy's name...' (Cai)

'...how to spell potential...' (Mai)

10) Providing a solution: often coming immediately after "Questioning"

‘...ok advanced medical technology...’(Kota, previously she had asked how to say the phrase with such a meaning)

11) Goal-setting: (This is different from the ‘Goal-setting on writing procedure or style’ under the Metacognitive category which functions more like a monitoring strategy attending to how to write coherently or in an interesting manner)

‘...I should say it’s on the playground of the final game...’ (Mai)

12) Tentative attempt: attempts trying/sounding out new thoughts or ideas before making them the goals or adopting them as parts of the story

‘...Jim [a terrible name no not Jim use a Chinese name] Xiaoming [a tacky name then]...’ (Cai, utterances outside the brackets are tentative attempts and those inside are the immediate evaluation of the specific tentative attempts)

13) Choosing the most appropriate linguistic item, structure, or content meaning

‘...addiction addict addiction maybe ok...’ (Kota)

14) Seeking information from the reading text

‘...what’s this man’s name...’(referring back to the reading text, Kota)

15) Direct translation from one’s L1 to L2 or L2 to L1

‘...laboratory should be “shiyanshi”...’ (Cai, direct translating from L2 to L1)

16) Looking up words in the (electronic) dictionary

For an example, see Table 2, Units 56-57

3. Affective:

17) Personal voice

‘...oh my god...’ (Cai).

18) Self-assessment (relatively subjective and emotional, as opposed to the relatively objective ‘Self-assessment’ under the Metacognitive category)

‘...oh horrible story...’ (Kota).

4. Editing:

19) Segments of utterances indicating editing or revising uninterrupted by any other writing activity.

For examples, see Table 3, Units 73-75 and Units 77-79

5. Rereading:

20) Segments of uninterrupted rereading of texts already written down or of the extract from the published story provided in the story-continuation task.

For examples, see Table 4, Units 27, 29, and 31.

Appendix C: Sample of the coded think-aloud protocol

The following excerpt is from Mai's think-aloud protocol generated in the prompted story writing task. The number before each think-aloud unit indicates its sequence in the whole think-aloud protocol. The parts in **block letters** highlight where 'Editing' happened; and the arrow '→' indicates a change from the original to the edited version.

1. I am now looking at what the ending is like then I can continue

Metacognitive: Clarifying a situation

Writing procedures

2. this protagonist had to work very hard in order to marry that girl

Metacognitive: Comments drawn based on the prompt of the story opening

3. I should use the first person

Cognitive: Goal-setting

Discourse & Organization (point of view)

4. *Editing:* 'I began to' → 'I **decided** to'

5. is the spelling right

Metacognitive: Evaluating what had been written down

Language

6. *Re-reading:* 'prepare for college entrance exam'

7. *Editing:* moving 'borrowing many old books from my friends' to a later place

8. now explain why I have decided to take part in the college entrance examination

Cognitive: Goal-setting

Content

9. *Editing*: ‘change my life’ → ‘**make a fortune**and change my life’

10. *Editing*: ‘finish middle school’ → ‘finish **my** middle school’

Appendix D. The coding results of the participants’ think-aloud protocols generated in the free-topic (F) and the prompted (P) story writing tasks

Participant	Mai		Cai		Kota	
	F	P	F	P	F	P
Total think-aloud units	83	63	64	44	199	241
Metacognitive	9.6%	23.8	15.6	34.1	42.7	35.7
Evaluating a situation	2.4%	%	%	%	%	%
Content	0%	3.2%	9.4%	15.9	16.1	17.4
Language	1.2%	0%	7.8%	%	%	%
Discourse & Organisation	1.2%	1.6%	0%	2.3%	7.0%	7.1%
Sociocultural context	0%	0%	1.6%	0%	6.0%	3.7%
Procedures	0%	1.6%	0%	0%	2.0%	3.7%
Clarifying a situation	1.2%	0%	0%	11.4%	0.5%	2.9%
Content	0%	3.2%	0%	2.3%	0.5%	0%
Language	0%	0%	0%	6.8%	0.5%	5.0%
Discourse & Organisation	1.2%	1.6%	0%	2.3%	0%	4.1%
Procedures	0%	0%	0%	0%	0%	0.4%
Clarifying what’d been written down	0%	1.6%	0%	2.3%	0.5%	0.4%
Content	0%	0%	0%	2.3%	0%	0%
Content	2.4%	0%	0%	0%	0%	0.8%
Evaluating what’d been written down	0%	4.8%	1.6%	0%	0%	0.8%
Content	2.4%	1.6%	0%	0%	15.1	4.6%
Content	0%	3.2%	1.6%	0%	%	0.4%
Language	1.2%	0%	0%	0%	2.5%	3.7%
Discourse & Organisation	1.2%	7.9%	3.1%	0%	5.0%	0.4%
Goal-setting on procedures/style	0%	7.9%	1.6%	0%	7.5%	2.5%
Procedures	2.4%	0%	1.6%	0%	5.5%	2.1%

Style	0%	0%	0%	0%	4.5%	0.4%
Self-assessment	2.4%	0%	0%	2.3%	1.0%	0.8%
Content	0%	0%	0%	2.3%	3.5%	0.4%
Discourse & Organisation	0%	3.2%	1.6%	0%	3.0%	0.4%
Checking word count	34.9	1.6%	0%	0%	0.5%	0.8%
Comments drawn on the prompt	%	44.4	78.1	9.1%	2.5%	3.7%
Cognitive	15.7%	%	%	43.2	0%	52.3
Questioning	3.6%	17.5	17.2	%	42.1	%
Content	8.4%	%	%	13.6	%	9.1%
Language	2.4%	6.3%	12.5%	%	11.1	4.6%
Discourse & Organisation	0%	11.1%	4.7%	13.6%	%	2.1%
Sociocultural context	1.2%	0%	0%	0%	4.5%	2.1%
Procedures	4.8%	0%	0%	0%	2.5%	0.4%
Goal-setting	2.4%	0%	0%	0%	4.0%	0%
Content	0%	7.9%	53.1	0%	0%	12.4
Language	2.4%	6.3%	%	11.4	0%	%
Discourse & Organisation	6.0%	0%	51.6%	%	14.6	9.5%
Providing a solution	2.4%	1.6%	0%	11.4%	%	1.7%
Content	2.4%	6.3%	1.6%	0%	10.6%	1.2%
Language	1.2%	3.2%	1.6%	0%	3.5%	2.5%
Discourse & Organisation	0%	3.2%	1.6%	9.1%	0.5%	2.1%
Sociocultural context	1.2%	0%	0%	6.8%	3.0%	0%
Choosing the most appropriate item	0%	0%	0%	2.3%	1.0%	0%
Content	0%	1.6%	0%	0%	0.5%	0.4%
Content	1.2%	0%	1.6%	0%	1.5%	13.7
Language	2.4%	1.6%	0%	0%	0%	%
Discourse & Organisation	3.6%	0%	1.6%	0%	7.5%	2.1%
Direct translating	1.2%	0%	0%	0%	0%	10.0%
Tentative attempt	2.4%	6.3%	1.6%	0%	7.0%	1.7%
Content	0%	4.8%	3.1%	2.3%	0.5%	0%
Language	1.2%	1.6%	3.1%	2.3%	0%	10.8
Discourse & Organisation	0%	0%	0%	0%	6.0%	%
Checking words in dictionary	0%	0%	0%	2.3%	3.0%	8.3%

Seeking information from the prompt	0%	4.8%	0%	0%	2.5%	2.1%
Content	0%	4.8%	0%	0%	0.5%	0.4%
Language	0%	0%	0%	4.5%	0%	0%
Affective	19.3	0%	3.1%	2.3%	0%	3.7%
Subjective self-assessment	0%	0%	0%	6.8%	0%	0%
Personal voice	36.1	11.1	3.1%	0%	2.0%	0.8%
Rereading	0%	0%	0%	6.8%	0.5%	0%
Editing		4.8%	3.1%	13.6	1.5%	0.8%
				0%	6.5%	9.5%
				2.3%	6.5%	1.7%

A Comparison of Vocabulary Learning through Listening and Vocabulary Enhancement Activities

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Abstract

The present study compared incidental and intentional vocabulary learning supplemented by meaning-focused input (see Hulstijn, 2001, for the positive effects) with word types as a parameter. The target vocabulary included English words and technical terms required by Japanese students. The participants were 24 Japanese bioscience majors. During the 17-week course of study, half of them learned the target words intentionally through reading plus vocabulary enhancement activities (RV), while the other half learned the same set of vocabulary incidentally through reading plus thematically-related listening activities (RL). The target vocabulary were 65 words selected specifically for bioscience students using a lexical profiler that incorporates three kinds of word lists: the Academic Word List (AWL), the LS Wordlist (Hagiwara & Naito, 2009), and the JACET 8000 List (Japan Association of College English Teachers, 2003). Statistical analyses of the pretest, retention and acquisition

tests showed that RV and RL are equally effective and that word type affects the students' retention of vocabulary.

Keywords: L2 vocabulary learning, incidental vocabulary learning, intentional vocabulary learning, vocabulary acquisition, vocabulary retention

Introduction

Previous studies have shown vocabulary plays an important role in communication (Wilkins, 1972) and in language use (Alderson, 2005). However, for a Japanese EFL student, learning vocabulary is challenging due to a lack of exposure to the target language. After six years of formal education in English at the secondary level, the average English vocabulary size of Japanese college-level students has been estimated by Laufer (2001) to be from 2000-2300 word families and by Mochizuki and Aizawa (2000) to be 3700 word families. Is either word size enough to comprehend written and aural texts easily? Research by Laufer (1997) showed a 3000 word-family threshold level is necessary for a good L1 reader to transfer reading strategies to L2, but when given a reading comprehension test this level of vocabulary knowledge only resulted in a score of 56%. Nation (2006) and Schmitt (2010) further indicate that for unassisted reading and comprehension of a wide range of authentic written texts, including novels and newspapers, an 8,000 to 9,000 word-family vocabulary is needed for text coverage of 98%, while for understanding authentic spoken discourse, knowledge of 6,000 to 7,000 word-families is necessary. In line with this, a recent study by Webb and Rodgers (2009) found that for movies, vocabulary knowledge of the most frequent 6,000 word-families plus proper nouns and marginal words provides 98% coverage. Bonk (2000) found that knowledge of less than 90% of total running words resulted in inadequate comprehension; however, good comprehension was possible with knowledge of 95% or more of word types. Whether students are required to read or listen, a study by Milton, Wade, and Hopkins (2010) has determined vocabulary size strongly correlates with success in both (cited in Stæhr, 2008). In short, a Japanese EFL student with an average knowledge of 2000 word families has to quadruple his/her vocabulary knowledge to read and listen successfully.

Rather than increasing their word knowledge haphazardly, a more practical goal for Japanese students may be to focus on words needed for academic purposes. For college-level students, this means learning both their field's technical vocabulary and academic vocabulary. However, EFL/ESL teachers usually do not have the necessary content knowledge for teaching technical vocabulary and such vocabulary is best learned in the discipline (Chung &

Nation, 2003). Academic vocabulary, on the other hand, is more familiar to the teachers and is useful for university learners for numerous reasons: it is commonly and widely used in academic texts; it is less known than technical vocabulary; and the usage of academic vocabulary can be taught effectively by EFL/ESL teachers who are usually not experts in the content area (Coxhead & Nation, 2001). For this purpose, Coxhead's Academic Word List (AWL) (2000) is widely used, although one problem with it is that it lacks versatility (Hyland & Tse, 2007). Reading instructors may be able to fill this gap by introducing technical senses of words, such as "wall" (cell wall) in biology (Coxhead & Nation, 2001). A better way, however, might be for teachers to include some technical vocabulary in the target words as this should motivate students in the same way content-based instruction (CBI) has been shown to raise students' interest (Elley, 1991; Grabe, 2009; Grabe & Stoller, 1997).

To further support students in acquiring L2 vocabulary knowledge, instructors must include opportunities for explicit intentional vocabulary learning and provide rich, meaning-focused input that allows for incidental vocabulary learning. Hulstijn (2001) argues these two activities are complementary in language classrooms. But, practically speaking, reading instructors may first need to select materials and vocabulary items corresponding to students' academic needs and interests. This may ensure the time and effort students spend on vocabulary learning is worthwhile (James, 2009). For this objective, a lexical profiler may help instructors to evaluate the appropriateness of reading material and select target words (Hagiwara & Naito, 2009). Following this, instructors can adapt the material for intentional and incidental vocabulary learning.

This study seeks to provide more information on optimal activities for promoting incidental and intentional vocabulary acquisition and retention in an instructed language context with bioscience major students. We compare reading plus focused listening activities (RL), where vocabulary items are learned incidentally, and reading plus vocabulary enhancement activities (RV), where items are learned intentionally. Incidental vocabulary acquisition is "the learning of one thing, for example vocabulary, when the student's primary objective is to do something else" (Laufer & Hulstijn, 2001, p. 10), whereas intentional vocabulary learning is "when the specific goal is to learn vocabulary, usually with an explicit focus" (Schmitt, 2008, p. 341). For this, we use theme-based instruction, utilizing a lexical profiler to select appropriate materials and choose target words. We hope this paper will shed light on the effectiveness of incidental and intentional vocabulary learning in theme-based instruction, and add to the findings of a growing body of research on the types of activities that lead to enhanced vocabulary learning and acquisition.

Literature Review

Reading Supplemented with Word-focused Activities

Although most L1 words are learned incidentally through reading (Krashen, 1985; Nagy, 1997), this is not true for L2 vocabulary acquisition. Research shows extensive reading results in very small gains for L2 learners and is impractical given both the slow acquisition rate and the reading volume necessary for sizeable gains (Laufer, 2001; Read, 2004). However, numerous studies have shown augmenting reading with word-focused activities leads to enhanced vocabulary acquisition (e.g. Hill & Laufer, 2003; Kim, 2008; Little & Kobayashi, 2011; Min, 2008; Peters, Hulstijn, Sercu & Lutjeharms, 2009). In these and other studies, various tasks and conditions were used with reading to see their effect on incidental vocabulary acquisition. For example, some studies examined the influence of marginal glosses or the use of electronic or print dictionaries to look up unknown vocabulary while reading (Hulstijn, Hollander & Greidanus, 1996; Knight, 1994). Other studies examined the effect of various word-focused activities after reading such as completing gapped texts (Hulstijn & Laufer, 2001) and writing sentences or a composition using the targeted words (Laufer, 2001). Still others compared a message-oriented task with form-oriented production or comprehension tasks (Hill & Laufer, 2003), or compared a composition task with comprehension exercises, including questions and gap-fills (Kim, 2008). Others yet have compared a reading only condition with conditions such as reading plus contextualized vocabulary activities (Paribakht & Wesche, 1997), reading plus narrow-reading activities or vocabulary enhancement activities (Min, 2008), and reading plus vocabulary enhancement activities or listening to thematically-related lectures (Little & Kobayashi, 2011). Finally, one study compared the effect of three “potential enhancement techniques”—test announcement, task-induced word relevance, and a vocabulary task—on word retention following a reading task (Peters, Hulstijn, Sercu & Lutjeharms, 2009).

All the studies found reading plus word-focused activities were superior to reading alone for vocabulary acquisition, with some task types affording greater vocabulary gains. According to Schmitt (2008), the more deeply a learner engages with a word by manipulating it, thinking about it, and using it, the greater the chance it will be acquired. Hulstijn and Laufer’s (2001) Involvement Load Hypothesis provides a framework for determining such task-induced involvement. It consists of a motivational component (need), a cognitive component (search), and an evaluative component which requires comparing a word or its meaning with other words or meanings to determine if it fits the context. Words processed with a higher degree of involvement are retained better. In the studies above, tasks requiring a

deeper level of processing or a higher task involvement load generally led to greater gains in acquisition and retention. In all these studies, word-focused activities promoted vocabulary acquisition and retention, with more productive tasks and tasks requiring more elaborate processing being better than receptive tasks.

Another significant benefit of augmenting reading with word-focused activities is that these activities increase exposure to words while allowing vocabulary from the reading to be recycled. Studies have found repeated encounters not only lead to a better understanding of how words are used but are necessary for acquisition (Elley & Mangubhai, 1983; Petchko, 2011). Providing learners with various word-focused activities allows them to encounter target words multiple times, thereby increasing the possibility of learning them.

Incidental Vocabulary Acquisition from Listening

Recently studies have begun to examine the effect of incidental vocabulary acquisition from listening for L2 learning for university students (Brown, Waring & Donkaewbua, 2008; Little & Kobayashi, 2011; Smidt & Hegelheimer, 2004; Vidal, 2003, 2011). Earlier studies focusing on reading stories to children found extensive listening facilitated L1 and L2 vocabulary acquisition (Elley, 1991; Schouten-van Parreren, 1989), with Elley reporting that children showed a 40% gain in L1 vocabulary if the teacher explained word meanings and 15% if the teacher did not. These more recent studies with university-age L2 learners, as shown below, indicate that extensive listening can be a source of vocabulary learning with fairly durable gains, albeit the gains are less impressive than with younger students.

For example, in a study involving 122 participants, Vidal (2003) found Spanish EFL students gained 30.41 out of 36 vocabulary items from listening to academic lectures on syllabus-related topics over a four-week period. A delayed post-test four weeks later found students retained roughly half of those words. The study targeted technical, academic, and low-frequency words, with students making greater gains for technical words. Vidal's (2011) more recent study with 248 participants compared the effects of reading and listening to lectures for incidental vocabulary acquisition and retention among university learners of four proficiency groups. Although both treatments resulted in gains, reading was superior to listening for both acquisition and retention, especially for the lowest proficiency learners. Acquisition from reading ranged from 19.38% to 37.6%, whereas for listening it ranged from 7.08% to 28.35%. The delayed post-test showed no difference between the treatments for the highest proficiency students. However, Vidal found more decay in gains made from reading than from listening except for the lowest proficiency learners.

The small study by Brown, Waring and Donkaewbua (2008), examining the rate at which 35 Japanese EFL students learned vocabulary under three conditions (reading, reading-while-listening, and listening-only) reported less promising results. The reading-while-listening condition resulted in the greatest gains (4.38 of 28 words), while the listening-only mode produced the smallest (0.56 of 28). A meaning-translation test administered 3 months later showed that most students retained only one word, whereas a multiple choice test showed higher learning and retention rates. Smidt and Hegelheimer's (2004) study investigating how authentic online academic lectures in a self-paced autonomous CALL activity can enhance incidental vocabulary acquisition found that after listening to one lecture and answering multiple-choice comprehension questions, the 24 adult ESL learners acquired 3.2 of the 20 most difficult vocabulary items. The decay from post-to delayed post-test was not statistically significant. The results indicated the CALL activity enhanced incidental vocabulary learning from listening.

In another study, with 30 students, Little and Kobayashi (2011) compared the effectiveness of incidental learning through reading plus thematically-related listening activities (RL) and intentional learning through reading plus vocabulary enhancement activities (RV). More specifically, the study examined which treatment was more effective for the acquisition and retention of 60 target vocabulary items and how the students' vocabulary knowledge changed quantitatively and qualitatively over 18 weeks. The participants took a pretest, an acquisition test and a delayed-retention test on the targeted words. Although statistical analyses of the tests demonstrated both treatments were effective for vocabulary acquisition and retention, reading plus vocabulary activities resulted in greater acquisition and retention (44% of target words vs. 28% for acquisition, and 25% vs. 21% for retention). However, decay for the RL group was significantly less than for the RV group.

It is interesting that both Vidal (2003, 2011) and Little and Kobayashi (2011) found less decay in the listening condition. Drawing on Toya (1992), who found explicit word elaborations significantly affect vocabulary gain, Vidal surmised that for retention information must be processed more deeply to enable transfer to and storage in long-term memory. She attributes this to the role of phonological memory, where items presented aurally are stored directly (unlike visual material which must be recoded) leading to more stable, durable traces (see Baddeley, Gathercole & Papagno, 1998). On the other hand, Brown, Waring and Donkaewbua (2008), who found the listening-only condition resulted in poor scores, hypothesized learners might listen at a lower headword level than they can read.

Theme-based Instruction

Theme-based instruction (TBI) is one approach within the broader methodology of content-based instruction (CBI) which seeks to integrate content and language (Met, 1999). That is, students learn “*about something* rather than learning *about language*” (Davies, 2003, p. 1). By exposing learners to engaging and relevant content, not only do teachers have an input-rich environment for presenting and teaching language features but learners also benefit from exposure to challenging but comprehensible input that leads to better language acquisition (Brinton, 2003). In addition, since learners are actually learning about something, learner motivation increases, and this is thought to promote more effective learning (Brinton, Snow & Wesche, 2003; Brown, 2001; Davies, 2003).

Within CBI, there are several approaches which differ according to the types of students and settings; whether the lesson focus is on content, language or both; and, the amount of coordination between content instructors and language instructors (Brinton, 2003). Because of these variables, CBI is often described as a continuum where learning content is prioritized at one end and learning language is prioritized at the other (Met, 1999). In theme-based instruction, the primary focus is on language learning, and the thematic content provides rich input that serves as “the point of departure” (Brinton, 2003, p. 203). Because the focus is not purely on content, Brown (2001) calls theme-based instruction a *weak* form of CBI.

Just as in other approaches to CBI, theme-based instruction follows several principles which offer clear advantages for learning. First, themes are chosen for their relevance to the students’ interests and academic goals (Brinton, 2003). Since the themes are selected with learners in mind, “students are more likely to try harder to understand and to stay focused” (Freeman & Freeman, 2006, p. 6). Second, the language items and structures that are taught are determined by the thematic content, and the skills and teaching activities are integrated by the content (Brinton, 2003). This provides a meaningful, non-fragmented context for learning. Third, both the materials and the tasks used are authentic (Brinton, 2003). Authentic texts and tasks that mimic those of the real world help promote meaningful learning (Brown, 2001). Lastly, the students’ attention is drawn to the specific features found in the texts, guiding them toward more successful language acquisition (Brinton, 2003). The merit of this is that students can build communicative competence while learning about the themes (Brown, 2001).

With regard to the advantages of this approach for vocabulary learning in particular, theme-based reading creates “extraordinary opportunities to implement intensive vocabulary

learning” (Grabe, 2009, p. 349). The vocabulary-rich content raises learners’ awareness of the importance of learning vocabulary for successful reading.

Word-related Features

Since this study’s materials and target words were specially chosen for bioscience students, and since Vidal’s earlier study (2003) found not only that learners made the greatest gains in technical words, a secondary aim of this study is to look at the effects of *type of word*. We hope simple analyses will provide greater insight into whether this influences vocabulary gain for bioscience majors.

Word lists and types of words. In this study target words comprise three types: Academic Word List (AWL) (Coxhead, 2000) words; technical words from the Life Science (LS) Wordlist (Hagiwara & Naito, 2009), a list of life science related words; and words from the JACET 8000 word list compiled by the Japan Association of College English Teachers (JACET) (2003). For learners studying academic English, the AWL is a useful tool. The AWL, a list of 570 headwords that are not in the most frequent 2,000 words of English, covers roughly 9% of running words common across a broad range of academic texts (Nation, 2001). The AWL words, when combined with the 2000 most frequent words, provide 86.6% coverage of academic texts (Nation, 2001). Although the AWL is clearly important for comprehending academic texts, focusing on these words alone is neither efficient nor sufficient. First, students may have already learned some of these words in high school. Secondly, AWL words are “sub-technical” rather than technical. Therefore, knowledge of them may not be enough to ensure comprehension of specialized texts, such as scientific texts (Nation, 2001). Consequently, technical words are another useful category of words, especially for learners in specialized disciplines and ESP programs.

The category “technical words” encompasses words unique to one subject area as well as more high-frequency words with specialized meanings within the subject area (e.g., *cell wall* in biology) (Nation, 2001). Although estimates differ on how much of a text technical words constitute, ranging from 5% of the tokens in an academic text (Coxhead & Nation, 2001) to 30% in a medical text (Chung & Nation, 2003), studying these words is useful for learners with specific language goals and needs such as reading research articles in a particular discipline. Given their importance, Nation (2001) states instructors should treat technical words like high-frequency vocabulary. However, identifying technical words learners need to know can be difficult for non-specialist EFL teachers (Chung & Nation, 2003). For this

reason, we decided to include words from the corpus-based LS Wordlist to better meet the participants' goals and needs.

Finally, words from the JACET 8000 were also included. This is a frequency list of 8000 basic words based on the British National Corpus (BNC) and approximately 6 million words from recent mass media, cinema, children's literature, English textbooks and tests used in Japan. The list presents 8000 words in eight levels, showing their difficulty and educational importance in Japan's education system. For example, the lowest level list consists of words taught in junior high school, the official start of English education in Japan; level six words are those taught to non-English major students in university, and the highest level words contain general words meant to represent the final general English target words for Japanese English learners. These levels help instructors identify words Japanese university students may have already learned as well as potentially unfamiliar items students should spend time learning.

As the participants are Japanese university bioscience majors in life sciences, the researchers felt those three word groups would have high saliency. We were also interested if more words of any one type are retained than the other types.

Purpose of the Study

The present study partially replicates our previous study (Little & Kobayashi, 2011) to deepen our understanding of the types of activities that can promote vocabulary acquisition and retention. This study, however, compares the effectiveness of reading plus listening activities and reading plus vocabulary enhancement activities in a theme-based instruction setting. In the present study, acquisition is referred to as the students' knowledge of the words in the recognition and production levels immediately after the treatment, and retention refers to the students' word knowledge ten weeks after the treatment. As mentioned earlier, theme-based instruction is a weak version of content-based instruction (CBI) where the course is structured around themes or topics (Brown, 2001). The theme in this study is bioscience. We asked the following questions:

Research Questions

Primary analysis

1. Do intermediate EFL university learners acquire target vocabulary items through reading plus thematically-related lectures and vocabulary focused activities as

measured by an acquisition and a retention test? If yes, what qualitative changes were brought about by each treatment?

2. What are the improvements in receptive and productive knowledge among the students?

Secondary analysis

3. What types of words did the students show better retention with as receptive and productive knowledge? Did the type of word affect the result?

Method

Setting and Participants

The participants were 24 second year EFL learners, 12 males and 12 females, majoring in bioscience at a Japanese university. They had studied English for eight years: six years in junior high and high school, and two years in the university where they concentrated on reading in the first year and on listening and speaking in the second year. The participants' vocabulary levels were tested using the Mochizuki Vocabulary Size Test (VST) (1998), a test specially developed to test Japanese EFL learners' English vocabulary size, where English words are matched with their Japanese translations. The test has seven levels corresponding to the seven frequency bands of the 1000 most frequent words. The participants' VST scores averaged 3998.58 (standard deviation 961.76), a size considered to be attained upon high school graduation in Japan.

To prevent potential learner involvement from influencing the study (Hulstijn & Laufer, 2001), the students were randomly assigned to either the reading plus vocabulary enhancement exercises (RV group) or to reading plus listening activities (RL group). The Mochizuki VST score average for the RV group was 4025 ($SD = 932.086$) and for the RL group it was 3972.17 ($SD = 1031.39$). There was no significant difference between groups' vocabulary size ($t(22) = -0.13$, $p > .05$, $r = 0.3$).

The study was conducted during the fall semester 2010 in a weekly 90-minute compulsory EFL reading class taught by one of the researchers. Since half of the participants would be studying vocabulary incidentally through listening activities and half would be studying vocabulary intentionally through vocabulary exercises, the students were simply told they would be given either listening or vocabulary assignments to complete in addition to their reading assignments. To preserve the distinction between incidental vocabulary learning and incidental learning, we did not tell the listening group that our focus was actually vocabulary learning in line with Laufer and Hulstijn's definition of incidental learning (2001).

The researchers submitted a research proposal and received approval from the university ethics committee. The participants were given the research proposal and consent form explaining the study's objective and methodology. The consent form clearly stated participants had the right to refuse to take part and to withdraw from the study at any time without consequences; they were also assured their identity and that of the university would be anonymous. All participants signed the consent form at their own free will. However, as the researcher was also the teacher, the students may have felt some pressure to participate in this study.

Study Design

Vocabulary and material selection

The researchers used a vocabulary profiling tool developed by a team in a Life Sciences program (Hagiwara & Naito, 2009) to confirm the reading materials were content specific enough with an appropriate level of lexis and to select the target vocabulary. Although these are two advantages of using a vocabulary profiler (Da, 2006), profilers such as Cobb's (2007) VocabProfile are based on general texts and are therefore insufficient for specialized fields (Hagiwara & Naito, 2009). It was for this reason that Hagiwara and Naito's tool was used.

This profiling tool was created using the LS (Life Science) Wordlist (Hagiwara & Naito, 2009), which uses two corpora (the LS Corpus and a learner corpus) as well as four general wordlists: the AWL, the BNC wordlist (Scott, 2008, cited in Hagiwara & Naito, 2009), the JACET8000 Basic Words, and the University Word List (Xue & Nation, 1984). The LS Corpus was compiled based on a total of 500 texts of 2000 words from 10 fields in life sciences. The LS Learner Corpus consists of 600 essays written by 400 life science majors at a university in Japan. In addition, for each JACET 8000 word, the profiler includes information about whether the word is known or unknown to Japanese students based on a survey given to 10 Japanese life science major university students.

The profiling results, given in the section "Reading materials", confirm the lexical appropriateness of the reading materials. Sixty-five target vocabulary items were selected (Appendix A) for this study using the profiling tool. In selecting the items, highest priority was given to words students were not familiar with but were included in the JACET 8000. Other significant factors were whether the items were included in the AWL or in the LS Wordlist. The vocabulary items were not pilot-tested because the researchers felt the profiler would be sufficient to judge, most words would be unfamiliar to the majority of the students. The pretest confirms that.

Study schedule

On the first day of the class, participants took the Mochizuki Vocabulary Size Test to measure their general vocabulary size and they also took the pretest to measure their knowledge of the study's target vocabulary. On the second day of the class which came one week after the first day, every participant was randomly assigned to RV or RL and was given the treatment materials. All the participants were in the same class, and it was taught by one of the researchers.

Teaching the first reading (Appendix B) started in the second class and continued until the third class. Similarly, teaching the second reading started in the third class and continued to the fourth class, with the third reading taught likewise. The sixth class was a review class to check the students' comprehension of all reading materials. With two holidays between the classes, the treatment process was eight weeks. The students took an unannounced acquisition test eight weeks after the pretest and immediately following seven weeks of instructional treatment, and took an unannounced retention test nine weeks after the acquisition test. Although the participants were not told they would be tested on the vocabulary items twice after the treatment, they were told to keep reviewing the words both during and after the treatment.

In addition to class work, each treatment group was given homework assignments to complete. For the RL homework assignment, each RL student received a CD containing the thematically-related lectures (Appendix C) and accompanying worksheets. They were assigned to listen to the lecture corresponding to the reading material and complete the worksheet composed of a dictation exercise and comprehension questions. The students were instructed to listen to it as many times as necessary. In the following class, the students checked their answers. Then, the RL students took turns verbalizing the answers.

The objective of the comprehension questions and the dictation exercises was to provide an opportunity for incidental acquisition of vocabulary. The exercises focused on students' listening. By encouraging repeated listening, we hoped to increase the likelihood that the students would notice the target vocabulary. Chances of learning the form and the meaning become greater as the students repeatedly listen (Toya, 1992; also Robbins & Ehri, 1994). Moreover, writing the answers provides opportunities for learners to actively recall and generate the words, which is shown to promote more significant gains in incidental vocabulary learning (Joe, 1998).

For RV students, the homework assignment was vocabulary-enhancing exercises (Appendix D) using the target vocabulary items. These exercises were based on receptive and

productive vocabulary exercise types, with each target word appearing four times in matching, sentence completion, word translation, and word-order exercises. Answers were checked in the following class.

Materials

Reading materials

The reading materials used in the classes were authentic readings (Appendix B), taken from websites written for a general audience except for one from a college-level biology text. The first reading was 539 words, the second and the third readings were of a similar length with 572 and 514 words respectively. All three readings were first profiled to see their appropriateness in terms of word level and word types. Analyses using the vocabulary profiler (Hagiwara & Naito, 2009) revealed more than 65% of the vocabulary used in all the reading materials overlapped with those found in the LS Wordlist. They also determined how familiar the words would be to the participants. Table 1 shows the familiarity of the words to the students based on the JACET 8000 study (Onishi, 2010).

Table 1. Students' familiarity with the vocabulary of each category by tokens

	Students' Familiarity	Reading 1	Reading 2	Reading 3
AWL	Familiar	18	8	18
	Unfamiliar	8	4	7
LS Wordlist	Familiar	321	334	308
	Unfamiliar	73	46	32
<i>AWL+LS Wordlist among the Above Two</i>	<i>Familiar</i>	<i>18</i>	<i>5</i>	<i>11</i>
	<i>Unfamiliar</i>	<i>1</i>	<i>1</i>	<i>0</i>
Other	Familiar	30	50	65
	Unfamiliar	108	136	95
Total		539	572	514
% Text Coverage		65.12%	67.66%	73.93%

Each reading's text coverage is quite low compared to the 95% coverage rate needed for learning vocabulary from meaning-focused input (Nation, 2001), but as one purpose of this class was to expose students to authentic texts from their discipline, the problem was not deemed important. Table 1 shows the reading materials were content-specific enough for bioscience major students in terms of vocabulary, with a sufficient number of words to learn.

Thematically-related lectures

To accompany each reading in the study, one of the researchers wrote and recorded three thematically-related lectures (Appendix C), bearing in mind the difficulties the listening group had in the previous study (Little & Kobayashi, 2011). The lectures picked up on ideas presented in the three readings as we felt students could process the lectures more easily if the content was already partially known. The length of the lectures was carefully controlled to keep them between 300-350 running words in length (the average length was 327 words), and to limit the recorded length of each lecture to roughly 3 minutes when read fairly slowly. The average recorded length of each lecture was 3 minutes and 6 seconds, with an average reading rate of 109 words per minute. Each target vocabulary item was used at least once in the thematically-related lectures.

Cobb's Vocabulary Profiler V.3 Classic was used to determine the lexical profile of each lecture. For the analysis, all non-lexical proper nouns were re-categorized as K1 words. In each of the lectures, first through third respectively, 82.41%, 88.18%, and 85.88% of the words were at the 1000 plus 2000 word level; 6.21%, 5.07%, and 8.53% were from the AWL; and 11.38%, 6.76%, and 5.59% were off-list words. In line with the readings, many of the off-list words in the lectures were words related to the themes or were scientific words.

Test Instrument

Min's (2008) modified version of Paribakht and Wesche's (1997) Vocabulary Knowledge Scale (VKS) was used as the pretest, the acquisition test, and the retention test. The VKS, and modified versions of it, is increasingly used in L2 vocabulary research (Bruton, 2009). It tests vocabulary depth across proficiency levels, and was developed for tracking short-term acquisition of new lexis along a continuum from non-recognition to productive use in sentences (Bruton, 2009, p. 288). The instrument's five stages "represent gains that are large enough to be meaningful on a self-report scale but small enough to reflect changes in knowledge during relatively limited instructional periods" (Wesche & Paribakht, 1996, p. 29). In addition, the VKS has several advantages. Firstly, the VKS has high reliability (Min, 2008) across proficiency levels (see Paribakht & Wesche, 1997, p. 180). Secondly, it allows for more accurate reflection of students word knowledge by relying on self-reports, without providing clues or allowing students to make guesses (Min, 2008). Finally, it allows students to show their partial knowledge of a word, while also being sensitive enough to indicate gains in target word knowledge over time (Paribakht & Wesche, 1993).

Min's scale (Appendix E), similar to the original VKS, measures the students' receptive and productive vocabulary knowledge through self-reports. Min, however, modified the scale by reducing the original five categories to four to establish a clear unknown/known word dichotomy and also to test receptive and productive word knowledge independently. Min took the position that her modified scale tests receptive and productive word knowledge independently and she did not assume one type of knowledge preceded the other (2008, p. 86). The four categories are Category 1 (words unknown), Category 2 (partial knowledge), Category 3 (receptive word knowledge), and Category 4 (productive word knowledge). Categories 1 and 2 establish unknown words and categories 3 and 4 are the known word categories. This dichotomy also makes it easier to interpret results.

The pretest and retention test showed satisfactorily high reliabilities (scores for receptive knowledge and productive knowledge were aggregated), Cronbach's $\alpha = .87$ and $.91$, respectively. This result suggests that the test scores consistently reflect students' knowledge of target vocabulary. The reliability of the acquisition test was not estimated because the test had to be returned to the students immediately after scoring and their responses to each item were not recorded. However, the test is also considered to be highly reliable since it is the same test as the pretest and retention test.

Scoring

All three tests, pretest, acquisition and retention tests, were rated by the two researchers. Regarding Categories 1 and 2 of the VKS, the researchers gave no points regardless of whether or not the students marked it. Points were only given for known word knowledge, not unknown word knowledge, with 65 points possible each for receptive and productive knowledge, allowing a maximum score of 130 points.

Regarding known word knowledge, one point was given for a correct English synonym or Japanese translation of any sense of the target word in the receptive knowledge category (Category 3). One of the researchers, a native English speaker, scored the students' responses given in English; and the other researcher, a native Japanese speaker, was responsible for those given in Japanese. When the word had multiple meanings, points were given when the response matched any one of the meanings. This was done because the VKS uses decontextualized words and the scale itself does not specify the context. For productive knowledge (Category 4), to get a point, the students needed to write a sentence using the word. Students received one point if the target word was used correctly grammatically and semantically, and the synonym/translation given in Category 3 was correct. Given the strong

influence of L1 on acquisition order, Japanese EFL learners acquire articles, third-person singular –s, and plural –s later than predicted by the natural order hypothesis (Luk & Shirai, 2009). For this reason, as long as the sentence was semantically correct, the researchers ignored these mistakes when the target word was a noun or verb. Grammar errors in other parts of the sentence were also ignored in line with Min (2008).

Results

Primary Analysis

Table 2 shows the mean scores and standard deviation of the three tests obtained by the two treatment groups. The acquisition test was considered to measure the acquisition of vocabulary items, whereas the retention test measured the retention of vocabulary items. The full score for each test was 130. Table 2 shows the students in both treatment groups linearly improved their scores from the pretest to the retention test.

Table 2: Descriptive statistics of pretest, acquisition, and retention tests scores

Group		Pretest	Acquisition	Retention
RV	Mean	13.5	48.5	70.9
	SD	7.7	21	18.5
RL	Mean	13.3	41.8	60.3
	SD	8.6	19.2	17.8

Table 3 presents the results of the three tests showing their mean scores on receptive and productive knowledge. Similar to the overall mean scores in Table 2, the students in both groups improved both types of knowledge from the pretest to the retention test with no exception. In addition, in each test, students' scores on receptive knowledge are consistently higher than their scores on productive knowledge.

Table 3: Descriptive statistics of scores on receptive and productive knowledge

Group		Pretest		Acquisition		Retention	
		Rec	Pro	Rec	Pro	Rec	Pro
RV	Mean	13.3	0.3	36.7	11.8	46.8	24.2
	SD	7.4	0.9	14.4	8.7	11.8	10.5
RL	Mean	12.8	0.5	31.3	10.5	38.3	22
	SD	8.7	1.2	15	7.6	11	10.2

A three-way mixed-design ANOVA was run to answer the research questions in the primary analysis (2 groups x 3 tests x 2 types of knowledge). Mauchly's test indicated the

assumption of sphericity had been violated for the interaction effect between knowledge and tests, $\chi^2(2) = 8.84$, $p < .05$. Therefore, degree of freedom was corrected using Greenhouse-Geisser estimates of sphericity ($\epsilon = .744$) with regard to this interaction effect. The results of the ANOVA shown in Table 4 indicate that the results given in the following two sections are statistically significant. This table will be referred to in each of these sections.

In general, results of statistical tests are largely affected by sample size. We acknowledge that it is difficult to obtain statistical significance in a small sample size, as in the case of this study where each group consists of 12 students. Generalizability of the results will be addressed when the conclusion and implications of the study are given.

Table 4: Tests of between-subjects and within-subjects effects (3-way ANOVA)

Source	SS	df	F	p
Between-subjects				
G	309.17	1	1.1	0.31
Error	6185.26	22		
Within-subjects				
K	12045.06	1	116.16	0
K x G	122.84	1	1.19	0.29
Error	2281.26	22		
T	16613.04	2	139.97	0
T x G	165.68	2	1.4	0.26
Error	2611.28	44		
K x T	648.04	1.49	7.88	0
K x T x G	47.18	1.49	0.57	0.52
Error (K x T)	1810.11	32.75		

Note. K=knowledge; G=group; T=test.

Effectiveness of each instructional treatment

The first research question asked whether the participants in the RV and RL groups acquired and retained the target vocabulary items. The ANOVA (Table 4) indicates that both groups of students linearly and significantly improved their test scores from the pretest to acquisition tests, $F(2, 44) = 139.97$, $p < .01$. This result is unexpected in that the students' retention test score was greater than that of the acquisition test even though the retention test was administered nine weeks after the acquisition test and there was no instruction in

vocabulary during that period. With regard to the difference between the two treatment groups, the RV group outperformed the RL group in terms of the three test scores (see Table 2). However, the ANOVA (Table 4) shows there was no significant main effect of treatment groups, indicating that the overall mean score obtained by these groups and the degrees of increases were similar, $F(1, 22) = 1.10, p > .05$. Furthermore, the degree of score improvement from the pretest to acquisition test and from acquisition to retention tests was not significantly different between the treatment groups (i.e., there was no interaction effect between the groups and tests), $F(2, 44) = 1.40, p > .05$.

The second part of the first research question asked whether there was any qualitative change in the students' receptive and productive knowledge within each group. Following Min (2008), no points were given to either unknown or partially known words. Each of the participants' responses was used as a unit of analysis. All 12 participants in each group rated their knowledge of each of the 65 target words giving 780 responses in each group in each test. First, the shift from "unknown" to "known" categories in each treatment group was analyzed. Figures 1 and 2 show the change in the participants' vocabulary knowledge within each group. Resembling Min's study, as well as our previous study (Little & Kobayashi, 2011), the participants in both RL and RV groups showed shifts from unknown including "unknown" and "partially known" to "known" including "receptive and "productive" categories. Not much difference was observed between the groups.

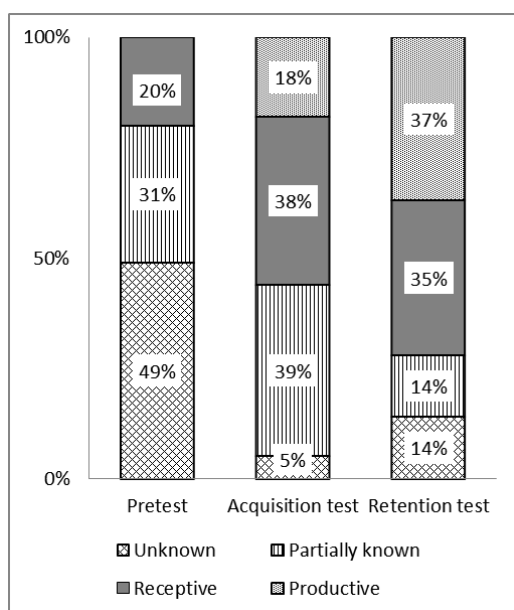


Figure 1: Response Patterns of the RV

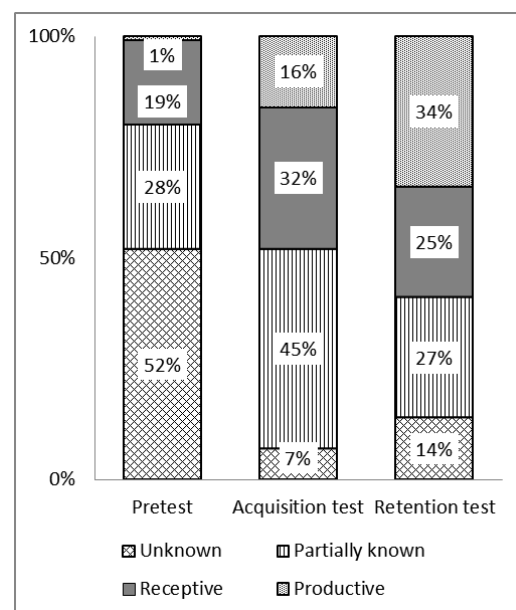


Figure 2: Response Patterns of the RL

The improvements in receptive and productive knowledge

Second, since the first research question confirmed there was no statistically significant difference in the improvement in acquisition and retention scores between study groups, we examined whether the treatments were equally effective in improving receptive and/or productive knowledge. Figure 3 shows changes in the students' receptive and productive knowledge between tests (scores of the two treatment groups are aggregated).

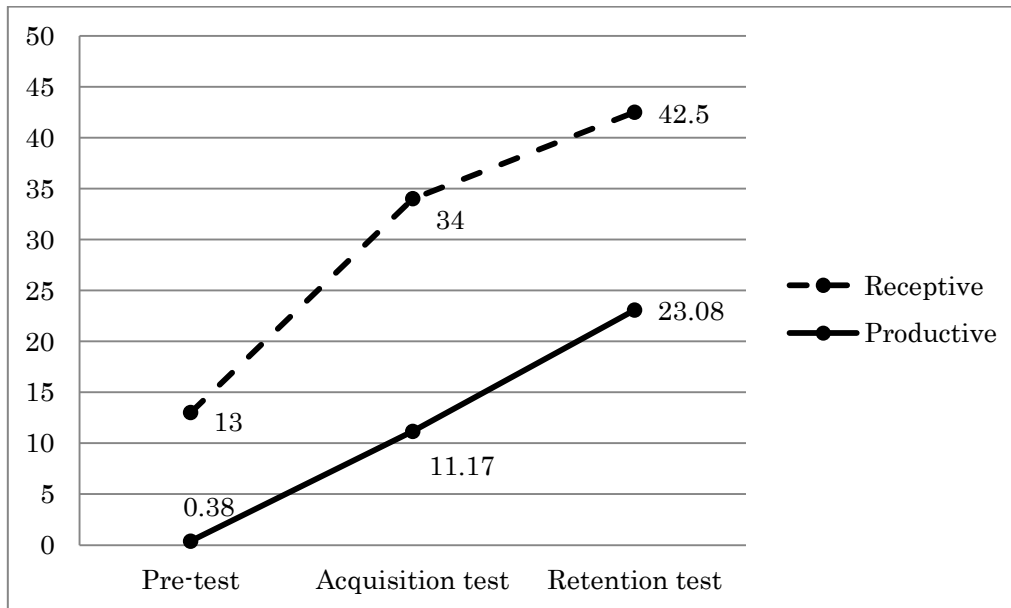


Figure 3: Mean Sub Scores for the Three Tests

The three-way ANOVA (Table 4) shows a significant interaction effect was observed between the two types of knowledge and the three tests, $F(1.49, 44) = 7.88, p < .01$. To break this interaction down, pairwise comparisons were performed. The results of the comparisons revealed all the pairwise differences were statistically significant at $p < .01$, with the exception of the difference in the receptive score between the acquisition and the retention tests ($p = .013$). Although all the differences were statistically significant at least at $p < .05$, it can be considered that the students' improvement in the receptive score after the second test administration was smaller than that in the productive score. The gain in productive knowledge after the instruction is larger than that in receptive knowledge. Nevertheless, this interaction effect was consistent across the two treatment groups; that is, the tests x knowledge x groups interaction effect was not significant, $F(1.49, 44) = 0.57, p > .05$.

Secondary Analysis

To see which types of words were retained better after the treatment, the results of the pretest and retention tests were compared. We obtained the number of students who retained each word after receiving the treatment in each category of knowledge. This was done by calculating the difference in the number of students who had knowledge of the same category between the pretest and retention tests. Table 5 gives the list of target words retained by more than 75% of the students in either of the treatment groups together with the word frequency, type of word, and the type of elaboration used when the words were presented. The number under “Percentage of the students who gained the knowledge” “RV” “Receptive” shows the percentage of students in the RV group whose knowledge of the word had shifted from “unknown” at the time of the pretest to “receptive” at the time of the retention test. On the other hand, the number under “Productive” shows the percentage of those whose knowledge of the word had shifted from either the “unknown” or “receptive” categories to “productive.”

Table 5: Words retained by more than 75% of the students in each group

Target Word (Number of Occurrence, Reading : Lecture)	Students' Un-familiarity	Life Science Corpora	AWL	Percentage of the students who gained the knowledge			
				RV		RL	
				Receptive	Productive	Receptive	Productive
1. accelerate (1:1)	✓			<u>75</u>	58	42	50
2. characterize (1:1)	✓			<u>75</u>	42	67	50
3. crucial (1:1)	✓	✓	✓	<u>75</u>	67	50	33
4. geneticist (1:1)		✓		58	<u>75</u>	58	<u>83</u>
5. molecule/ molecular (5:5)	✓	✓		<u>75</u>	<u>100</u>	17	67
6. polymer (1:1)	✓	✓		33	67	58	<u>83</u>
7. purify (1:1)		✓		<u>83</u>	33	<u>75</u>	25
8. tin (1:1)	✓			<u>83</u>	67	50	25
9. x ray (2:2)	✓	✓		25	<u>83</u>	33	50
10 lab (2:2)	✓	✓		67	<u>75</u>	<u>75</u>	<u>92</u>
11. misunderstand (1:1)	✓			<u>83</u>	67	58	58
12. projects (1:1)			✓	33	<u>75</u>	17	50
13. famine (1:1)	✓	✓		<u>83</u>	17	33	17
14. misery (1:1)	✓			<u>75</u>	8	50	8
15. offspring (1:1)	✓	✓		<u>75</u>	17	67	50
16. pigeon (2:1)	✓	✓		<u>92</u>	58	<u>75</u>	<u>75</u>
Total number of words retained	12	10	2	11	5	3	4

* The category “Students’ unfamiliarity” comprises words that Onishi (2000) identified as included in the JACET 8000 but unknown to students.

Regarding the types of words retained by the students, the table shows that of the 16 words retained as either receptive or productive knowledge, with some overlapping between word type, 13 were JACET 8000 words unfamiliar to the students (23% of the same category), 10 words were from the LS Wordlist (42%), and 2 were AWL words (13%). The percentages show the majority of the better retained words were either JACET 8000 words and/or life science-related words.

The variety in the total number of words retained shown in Table 5 indicates that although the two treatments were found to be equally influential in overall vocabulary acquisition and retention, the way they worked was different. There were 11 words commonly retained in receptive knowledge by the RV group students, while only three words were commonly retained by the RL group students. This indicates the RV students showed a tendency to retain a similar set of words, whereas the words retained by the RL students varied. Among the 11 words retained commonly by the RV students, 10 were categorized as JACET 8000 with 5 also categorized as life science-related and only one belonging to the life science-related category alone.

Discussion

This study sought to compare intentional and incidental vocabulary acquisition and retention under two conditions: reading plus vocabulary enhancement activities (RV) and reading plus listening activities (RL). Theme-based materials on topics relevant to the participants, all bioscience majors, were used for the reading and listening texts. A lexical profiling tool developed specifically for life science texts was then used to confirm that the level and content of the materials were appropriate for the participants. The profiler was also used to select target vocabulary relevant for the participants. The findings of the study are discussed in relation to each of the research questions.

The first question of the primary analysis asked if the students acquired target vocabulary through reading plus vocabulary enhancement activities (RV) and reading plus listening activities (RL). Our analysis indicated that in instructed contexts both reading plus vocabulary enhancement activities (RV) and reading plus listening activities (RL) were equally effective for vocabulary acquisition and retention, corroborating findings from the researchers' previous study that students can learn vocabulary both intentionally from word-focused activities and incidentally from listening (Little & Kobayashi, 2011). These findings are supported by other studies—both large (Vidal, 2003, 2011) and small (Brown et al., 2008; Smidt & Hegelheimer, 2004)—and contribute to the growing body of literature

exploring incidental vocabulary acquisition through listening. The present study further expands this line of research by indicating that theme-based instruction, where ideas and lexis are salient to the learners, has a positive effect on vocabulary acquisition and retention.

The second question asked what qualitative changes each treatment brought about. First, regarding receptive and productive knowledge, students in both treatment groups had greater receptive knowledge than productive knowledge of the target words on the acquisition as well as the retention test. This is not surprising as research shows acquiring productive use of vocabulary items is a much more difficult, time-consuming process than acquiring receptive use (Nation, 2001; Schmitt, 2008).

When the two treatment groups are compared, however, the RV treatment showed a more consistent effectiveness. Similarly, Vidal (2003, 2011) found the reading was superior to listening to academic lectures for vocabulary acquisition, particularly among lower level learners. In the present study, the difference may be attributed to the types of activities the learners engaged in with the words. Research has shown an explicit focus on vocabulary instruction (such as the vocabulary enhancement activities the RV group did for homework) after words are initially introduced in a lesson may help limit decay (de la Fuente, 2006). Indeed, Hill and Laufer (2003) found following up a reading task with explicit vocabulary exercises resulted in better receptive vocabulary learning than simply answering comprehension questions. For this study, however, perhaps tellingly, participants' feedback indicated the RV group felt their particular treatment was more effective for vocabulary learning than did the RL group.

Various factors may explain why listening is not as effective for acquisition and retention for many learners. First, the learners may have had difficulty recognizing word boundaries in the continuous speech of the lectures and thus were unable either to pick up on or to extract unfamiliar words. Directly related to this is the narration speed (about 100 words per minute) and the learners' unfamiliarity with phonological features, such as linking and reduction. Second, as Brown, Waring and Donkaewbua (2008) pointed out, learners do not listen at the same headword level at which they read. Nation (2001) surmises a coverage rate of 99% may be necessary for extensive listening, whereas the coverage rate for these lectures was between 81-84%. Third, even more proficient listeners may have been unable to attend to form and process content for meaning at the same time. Van Patten notes that, in this situation, learners are more likely to devote attentional resources to meaning (1996, cited in Petchko, 2011). Finally, although both groups were evenly matched based on the results of the initial

vocabulary test, the participants' listening abilities were not tested. It is possible that they were much lower than the participants' reading abilities.

Nonetheless, this does not explain the fact that some participants in the RL group were able to acquire and retain words incidentally. Interestingly, the study by Peters, Hulstijn, Servu and Lutjeharms (2009) found that task-induced word relevance, such as the need created by the comprehension questions answered by the RL group, was more effective for retention than vocabulary exercises. Another explanation may be related to the importance of noticing for second language acquisition. The participants in this study as well as in the study by Smidt and Hegelheimer (2004) were free to listen to the materials repeatedly. Smidt and Hegelheimer posit that when learners choose to listen again, it indicates they have noticed gaps in their understanding.

Finally, with regard to this research question, a surprising finding related to the qualitative change in word knowledge was the increase in productive knowledge for both treatment groups from the acquisition to the retention test. This also occurred in the study by Brown, Waring and Donkaewbua (2008), who note that this has happened in other studies (e.g. Waring & Takaki, 2003). There are three possible explanations for this. First, participants in both groups were encouraged to review the vocabulary on their own using the provided materials. Previous studies (e.g. Elley & Mangubhai, 1983; Nagy, Herman & Anderson, 1985) have found that increasing the number of times students encounter the target words in a variety of word-focused activities may be beneficial for the students' learning of them. Second, it is possible that reviewing the words using the same word-focused exercises repeatedly may have the same effect. Third, the gain in productive knowledge for both groups may be attributable to the efficacy of theme-based instruction, which not only provides opportunities to learn words but also raises the learners' awareness of the importance of learning vocabulary through engaging, vocabulary-rich content (Grabe, 2009). In line with this, Nation (2001), drawing on Corson (1995), makes a distinction between "motivated and unmotivated vocabulary" (p. 30). According to Corson, for numerous reasons learners may or may not be motivated to use certain kinds of vocabulary productively. We speculate the target vocabulary in this study, chosen specifically for the participants and presented in content relevant to their majors, may have had greater saliency with the students, motivating them to use it productively.

The purpose of the secondary analysis was to see whether word types would affect the students' acquisition of both receptive and productive knowledge. A close look at the data in the secondary analysis revealed RV is more consistent in its effectiveness than RL in the

retention of the JACET 8000 words and the life science-related words especially in relation to receptive knowledge. That word type seems to have affected the students' learning again corroborates previous findings (Vidal, 2003, 2011). The JACET 8000 words and life science-related words were better retained as receptive knowledge after receiving the treatments than the AWL words. There are several possible reasons for this. Among the 12 better retained JACET 8000 words, nine were categorized as either level 4 or 5 in the JACET 8000, which are defined as university entrance examination level. Although these words were labelled "unfamiliar" by Onishi (2000), the students might have been exposed to these words while preparing for university entrance exams even though they did not learn them at that time. The better retention of life science-related words than other words is ascribable to the theme-based instruction and the words' high saliency with the participants. In the present study, we used texts on topics related to biology with bioscience major students. Brown (2001) gives four principles underlying theme-based instruction which are automaticity, meaningful learning, intrinsic motivation and communicative competence. Two principles, "meaningful learning" and "intrinsic motivation," may have been strong factors for better retention of life science-related words. Although other target words were presented in the theme-related readings and lectures, the life science-related words may have been perceived by the students as being more indispensable to their academic achievement and future professions. L2 learners are more likely to acquire language, including vocabulary, when it is meaningful to them.

Conclusion and Implications

The results of the primary analysis suggest that EFL instructors teaching vocabulary should not rely exclusively on reading materials and word-focused activities to facilitate acquisition, but when possible should augment them with thematically-related listening materials. As learning styles and preferences differ among students, presenting target vocabulary in both reading and listening modes would be more effective. For recordings, instructors can simplify parts of the readings or find/write related texts. In addition, it would be more usable for the students if these materials can be downloaded to the students' smart devices. When making these listening materials, there are several issues that instructors should consider.

First, students' written responses in the survey indicated that sometimes the students were unable to recognize word boundaries and found the recording speed too fast. In this study, the recordings had an average of 109 words per minute (wpm). However, in Brown,

Waring and Donkaewbua's study with Japanese university students, they found 93 wpm to be appropriate for first-time listening (2008, p. 145). To enable students of various listening abilities to benefit from this mode, we recommend recording at three different speeds, with the fastest recording at 100 wpm and the others at 90 wpm and 80 wpm. In addition to a slower speech rate, the learners would also benefit from clearer segmentation and articulation. To this end, when making recordings, instructors should be careful to eliminate linking and reduction since these make word boundaries less distinct and listening more difficult. If adapting reading texts to make listening materials, we also recommend modifying the syntax to make the input more comprehensible. Teng (2001) found that for low to intermediate learners, both slower speech rate and syntactic modification aided learners in processing input.

Second, in preparing listening texts, it is important that coverage be quite high to ensure the learners can attend to both lexis and content. In this study, the coverage rate (81%-84%) in the listening passages may have been too low. Considering the possibility that listening ability is lower than reading ability, we not only recommend that the text be short, but also that the coverage rate be set a minimum of 95%, the rate Nation (2001) recommends for meaning-focused input. That is, five unfamiliar target words per 100 recorded words. We surmise a higher coverage rate may encourage initial noticing of the new vocabulary and enhance acquisition.

Finally, the recordings should be accompanied by activities with greater task-induced relevance, for example diagrams, comprehension questions, gap fills, or note-taking. Nation and Newton (2009) note that "information transfer activities" (p. 47), which require the form of the message to be changed but involve minimal writing (i.e., drawing and labelling a diagram or completing a chart based on the message), not only scaffold the learner but encourage deep processing of the input. Because these activities focus the learners' attention on listening to the key words and information without the need for extensive reading or writing, they are better for lower-level learners than note-taking or answering comprehension questions (Nation & Newton, 2009). It is also worthwhile for instructors to spend time making vocabulary enhancement activities, such as the ones shown in Appendix D, for each set of target words. Not only will some learners find these supplementary materials appealing and motivating, but learners will benefit from meeting words more than once in varied contexts, and may even lead to learning the collocation of the words.

The results of the secondary analysis demonstrate the effectiveness of applying theme-based instruction to vocabulary teaching. Hancioğlu and Eldridge (2007) note that

when learners find texts uninteresting, they also find them hard to follow, and motivation decreases. Although the comment was made about reading texts, it may also be true of listening texts. Thus, it appears that one can make a strong case for theme-based instruction as a means of promoting acquisition. Whenever possible, we recommend choosing themes related to the students' majors or fields of interest to increase both saliency and motivation. The results also demonstrated the usefulness of lexical profilers in selecting target vocabulary for specific groups of learners such as the bioscience majors in this study or students in ESP programs. Therefore, we strongly recommend that instructors choose target words that are relevant to the learners, such as technical vocabulary and words related to their majors, and are necessary for understanding theme-based materials. For more general words, make sure that they are presented in a context that is salient to the learners. Then, these words, too, will be relevant and will not be seen as useless.

The small sample size was one limitation of this study. Although the authors believe that this study will give some hints on vocabulary teaching like the other studies (Brown, Waring & Donkaebua, 2008; Smidt & Hegelheimer, 2004) where the number of students was small (see section "Incidental Vocabulary Acquisition from Listening"), more generalized discussion would be possible with a larger number of participants in a future study. Another limitation is that it did not seek to explore possible affective factors underlying the words students retained. Further study in this area may suggest what types of words to choose for target words.

Suggestions for further studies based on the findings of this study include the following. When comparing incidental vocabulary acquisition, rather than placing participants in groups randomly, it might be better to allow students to choose their instructional treatment. Presumably participants who are aural learners or who feel comfortable with a listening mode will choose that treatment. The outcome might shed greater light on listening as a source of incidental vocabulary knowledge. Another thing that also might need to be considered, in addition to frequency of occurrence when studying incidental vocabulary learning, is the context in which the target words appear. As Hancioğlu and Eldridge (2007) point out, frequency tells us very little about how comprehensible a text is. It could be that some words appeared in sentences or contexts that the learners were incapable of decoding. It is also possible that they were exposed to and acquired other words in the listening and reading texts that were not targeted and thus were not tested. If we want to measure incidental vocabulary acquisition, selecting target words and testing for those may not be the best way.

Last but not least, further studies are needed to clarify what activities would promote the students' gaining productive knowledge of the target words as well as the factors motivating productive vocabulary use.

References

- Alderson, J. C. (2005). *Diagnosing foreign language proficiency*. London: Continuum.
- Baddeley, A., Gathercole, S. & Papagno, C. (1998). The phonological loop as a language learning device. *Psychological Review*, 105(1), 158-173.
- Basic Word List Revision Committee, Japan Association of College English Teachers (JACET). (2003). *JACET List of 8000 Basic Words*. Japan College English Teachers.
- Bonk, W. (2000). Second language lexical knowledge and listening comprehension. *International Journal of Listening*, 14, 14-31.
- Brinton, D. M. (2003). Content-based instruction. In D. Nunan (Ed.), *Practical English language teaching* (pp. 199-224). New York: McGraw-Hill.
- Brinton, D. M., Snow, M. A. & Wesche, M. B. (2003). *Content-based second language instruction*. Ann Arbor: University of Michigan Press.
- Brown, H. D. (2001). *Teaching by principles: An interactive approach to language pedagogy*. New York: Pearson Education.
- Brown, R., Waring, R. & Donkaewbua, S. (2008). Incidental vocabulary acquisition from reading, reading-while-listening, and listening to stories. *Reading in a Foreign Language*, 20(2), 136-163.
- Bruton, A. (2009). The vocabulary knowledge scale: A critical analysis. *Language Assessment Quarterly*, 6, 288-297.
- Chung, T. & Nation, P. (2003). Technical vocabulary in specialized texts. *Reading in a Foreign Language*, 15(2), 103-116.
- Cobb, T. (2007). Vocabulary Profiler, on Compleat Lexical Tutor. Retrieved August.13, 2010, from <http://www.lextutor.ca/vp/eng/>.
- Corson, D. J. (1995). *Using English words*. Dordrecht, The Netherlands: Kluwer Academic Publishers.
- Coxhead, A. (2000). A new academic word list. *TESOL Quarterly*, 34(2), 213-238.
- Coxhead, A. & Nation, P. (2001). The specialized vocabulary of English for academic purposes. In J. Flowerdew & M. Peacock (Eds.), *Research perspectives on English for academic purposes* (pp. 252-267). Cambridge: Cambridge University Press.

- Da, J. (2006). A web-based vocabulary profiler for Chinese language teaching and learning. Paper presented at the Fourth International Conference and Workshops on Technology and Chinese Language Teaching. Los Angeles, CA. Paper retrieved March 29, 2010 from <http://lingua.mtsu.edu/academic/tclt4/JunDa-TCLT4Paper.pdf>.
- Davies, S. (2003). Content based instruction in EFL contexts. *The Internet TESL Journal*, *IX*(2). Retrieved July 13, 2010, from <http://iteslj.org/Articles/Davies-CBI.html>
- de la Fuente, M. J. (2006). Classroom L2 vocabulary acquisition: Investigating the role of pedagogical tasks and form-focused instruction. *Language Teaching Research*, *10*(3), 263-295.
- Elley, W. (1991). Acquiring literacy in a second language: The effect of book-based programs. *Language Learning*, *41*(3), 375-411.
- Elley, W. B. & Magubhai, F. (1983). The impact of reading on second language learning. *Reading Research Quarterly*, *19*(1), 53-67.
- Freeman, D. E. & Freeman, Y. S. (2006). Teaching language through content themes: Viewing our world as a global village. In T. A. Young & N. L. Hadaway (Eds.), *Supporting the literacy development of English learners: Increasing success in all classrooms* (pp. 61-78). Newark, DE: International Reading Association.
- Grabe, W. (2009). *Reading in a second language: Moving from theory to practice*. Cambridge: Cambridge University Press.
- Grabe, W. B. & Stoller, F. L. (1997). Content-based instruction: Research foundations. In M. A. Snow, & D. M. Brinton (Eds.), *The content based-classroom: Perspectives on integrating language and content* (pp. 5-21). New York: Longman.
- Hagiwara, A. & Naito, M. (2009). Developing a profiling tool for English language texts on life sciences: compilation of a bioscience corpus and its application. *The Journal of Tokyo University of Pharmacy and Life Sciences*, *12*, 11-17.
- Hancioğlu, N. & Eldridge, J. (2007). Texts and frequency lists: some implications for practising teachers. *ELT Journal*, *61*(4), 330-340.
- Hill, M. & Laufer, B. (2003). Type of task, time-on-task and electronic dictionaries in incidental vocabulary acquisition. *IRAL*, *41*, 87-106.
- Hulstijn, J. H. (2001). Intentional and incidental second language vocabulary learning: A reappraisal of elaboration, rehearsal and automaticity. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 258–286). Cambridge: Cambridge University Press.

- Hulstijn, J. H., Hollander, M. & Greidanus, T. (1996). Incidental vocabulary learning by advanced foreign language students: The influence of marginal glosses, dictionary use, and reoccurrence of unknown words. *The Modern Language Journal*, 80(3), 327-339.
- Hulstijn, J. H. & Laufer, B. (2001). Some empirical evidence for involvement load hypothesis in vocabulary acquisition. *Language Learning*, 51, 539-558.
- Hyland, K. & Tse, P. (2007). Is there an 'Academic Vocabulary'? *TESOL Quarterly*, 41(2), 235-253.
- James, M. O. (2009). The eight-fold path of vocabulary development. *Asian EFL Journal*, 11(5), 124 – 135.
- Japan Association of College English Teachers (2003). *JACET 8000*. Tokyo: Japan Association of College English Teachers.
- Joe, A. (1998). What effects do text-based tasks promoting generation have on incidental vocabulary acquisition? *Applied Linguistics*, 19(3), 357 – 377.
- Kim, Y. J. (2008). The role of task-induced involvement and learner proficiency in L2 vocabulary acquisition. *Language Learning*, 58(2), 285-325.
- Krashen, S. (1985). *The input hypothesis: Issues and implications*. Harlow, UK: Longman.
- Knight, S. (1994). Dictionary: The tool of last resort in foreign language learning? A new perspective. *Modern Language Journal*, 78, 285-299.
- Laufer, B. (1997). The lexical plight in second language reading: Words you know, words you think you know, and words you can't guess. In J. Coady & T. Huckin (Eds.), *Second language vocabulary acquisition: A rationale for pedagogy* (pp. 20-34). Cambridge: Cambridge University Press.
- Laufer, B. (2001). Reading, word-focused activities and incidental vocabulary acquisition in a second language. *Prospect* 16(3), 44-54.
- Laufer, B. & Hulstijn, J. (2001). Incidental vocabulary acquisition in a second language: The construct of task-induced involvement. *Applied Linguistics*, 22(1), 1-26.
- Little, A. & Kobayashi, K. (2011). Comparing listening and vocabulary enhancement activities for vocabulary acquisition and retention. *The Malaysian Journal of ELT Research*, 7(1), 1-63.
- Luk, Z. P. & Shirai, Y. (2009). Is the acquisition order of grammatical morphemes impervious to L1 knowledge? Evidence from the acquisition of plural -s, articles, and possessive -s. *Language Learning*, 59(4), 721-754.
- Met, M. (1999). Content-based instruction: Defining terms, making decisions. NFLC Reports. Washington, DC: The National Foreign Language Center.

- Milton, J., Wade, J. & Hopkins, N. (2010). Aural word recognition and oral competence in a foreign language. In R. Chacón-Beltrán, C. Abello-Contesse, M. Torreblanca-López, and M. López-Jiménez (Eds.), *Further insights into non-native vocabulary teaching and learning* (pp. 83-97). Bristol: Multilingual matters.
- Min, H. (2008). EFL vocabulary acquisition and retention: Reading plus vocabulary enhancement activities and narrow reading. *Language Learning*, 58(1), 73-115.
- Mochizuki, M. (1998). A vocabulary size test for Japanese learners of English. *IRLT Bulletin*, 12, 27-53.
- Mochizuki, M. & Aizawa, K. (2000). An affix acquisition order for EFL learners: an exploratory study. *System* 28-1, 291-304.
- Nagy, W. (1997). On the role of context in first-and second-language vocabulary. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, acquisition, and pedagogy* (pp. 64-83). Cambridge: Cambridge University Press.
- Nagy, W. E., Herman, P. A. & Anderson, R. C. (1985). Learning words from context. *Reading Research Quarterly*, 20(2), 233-253.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
- Nation, I. S. P. (2006). How large a vocabulary is needed for reading and listening? *Canadian Modern Language Review*, 63(1), 59-82.
- Nation, I. S. P. & Newton, J. (2009). *Teaching ESL/EFL listening and speaking*. New York: Routledge.
- Onishi, H. (2010). *The measurement of receptive vocabulary size*. Unpublished graduation thesis, Tokyo University of Pharmacy and Sciences, Tokyo.
- Paribakht, T. S. & Wesche, M. B. (1993). The relationship between reading comprehension and second language development in a comprehension-based ESL program. *TESL Canada Journal*, 11(1), 9-29.
- Paribakht, T. S. & Wesche, M. (1997). Vocabulary enhancement activities and reading for meaning in second language vocabulary development. In J. Coady & T. Huckin (Eds.), *Second language vocabulary acquisition: A rationale for pedagogy* (pp. 174-200). Cambridge: Cambridge University Press.
- Petchko, K. (2011). Input enhancement, noticing, and incidental vocabulary acquisition. *Asian EFL Journal*, 13(4), 228 – 255.

- Peters, E., Hulstijn, J. H., Sercu, L. & Lutjeharms, M. (2009). Learning L2 vocabulary through reading: The effect of three enhancement techniques compared. *Language Learning*, 59(1), 113-151.
- Read, J. (2004). Research in teaching vocabulary. *Annual Review of Applied Linguistics*, 24, 146-161.
- Robbins, C. & Ehri, L. C. (1994). Reading storybooks to kindergartners helps them learn new vocabulary words. *Journal of Educational Psychology*, 86(1), 54-64.
- Schmitt, N. (2010). *Researching vocabulary*. New York: Palgrave Macmillan.
- Schmitt, N. (2008). Review article: Instructed second language vocabulary learning. *Language Teaching Research*, 12(3), 329-363.
- Schouten-van Parreren, C. (1989). Vocabulary through reading: Which conditions should be met when presenting words in texts? *AILA Review*, 6, 75-85.
- Scott, M. (2008). *The BNC wordlist*. Retrieved October 10, 2007, from <http://www.lexically.net/wordsmith/index.html>
- Smidt, E. & Hegelheimer, V. (2004). Effects of online academic lectures on ESL listening comprehension, incidental vocabulary acquisition, and strategy use. *Computer Assisted Language Learning*, 17(5), 517-556.
- Stæhr, L. S. (2008). Vocabulary size and the skills of listening, reading and writing. *Language Learning Journal*, 36(2), 139-152.
- Teng, H. C. (2001). Impact of Speech Modification on EFL Listening. *Proceedings of the PAC3 at JALT 2001*, 22-25.
- Toya, M. (1992). Form of explanation in modification of listening input in L2 vocabulary learning. Unpublished MA thesis in ESL. Department of ESL, University of Hawaii, Honolulu.
- Vidal, K. (2003). Academic listening: A source of vocabulary acquisition? *Applied Linguistics*, 24(1), 56-89.
- Vidal, K. (2011). A comparison of the effects of reading and listening on incidental vocabulary acquisition. *Language Learning*, 61(1), 291-258.
- Waring, R. & Takaki, M. (2003). At what rate do learners learn and retain new vocabulary from reading a graded reader? *Reading in a Foreign Language*, 15, 130-163.
- Webb, S. & Rodgers, M. P. H. (2009). The lexical coverage of movies. *Applied Linguistics*, 30(3), 407-427.
- Wesche, M. & Paribakht, T. S. (1996). Assessing second language vocabulary knowledge: Depth versus breadth. *The Canadian Modern Language Review*, 53(1), 13-40.

Wilkins, D.A. (1972). *Linguistics in Language Teaching*. London: Arnold.

Xue, G., & Nation, I. S. P. (1984). A university wordlist. *Language Learning and Communication*, 3, 215-229.

Appendix A

List of 65 Target Vocabulary Items

	Reading 1				Reading 2				Reading 3			
	Target Word (Number of Occurrence, Reading : Lecture)	Students' Un- familiarity	Life Science Corpora	AWL	Target Word (Number of Occurrence, Reading : Lecture)	Students' Un- familiarity	Life Science Corpora	AWL	Target Word (Number of Occurrence, Reading : Lecture)	Students' Un- familiarity	Life Science Corpora	AWL
1	abundance (2:2)	✓	✓		controversy (1:1)	✓	✓	✓	albeit (1:1)	✓	✓	
2	accelerate (1:1)	✓			decidedly (1:1)	✓			analogy (1:2)	✓		
3	assembly (1:1)	✓			fellowship (1:1)	✓	✓		breed (1:1)	✓	✓	
4	attempt (1:2)	✓			friction (1:1)	✓			briefly (1:1)	✓		
5	characterize (1:1)	✓			fundamental (1:1)	✓		✓	conceive (1:1)			✓
6	coherent (1:1)	✓			lab (2:2)	✓	✓		corresponded (1:1)			✓
7	composition (2:1)	✓			meaningful (1:1)	✓			elements (1:1)			✓
8	crucial (1:1)	✓	✓	✓	misunderstand (1:1)	✓			evolution (3:3)			✓
9	density (1:1)	✓			ovarian (1:1)	✓	✓		famine (1:1)	✓	✓	
10	experimental (1:1)	✓			persist (1:1)			✓	focus (1:1)			✓
11	geneticist (1:1)		✓		productive (1:1)	✓	✓		independently (1:1)	✓		
12	molecule/ molecular (5:5)	✓	✓		projects (1:1)			✓	infinite (1:1)	✓		
13	nitrogen (2:1)	✓	✓		publication (1:1)	✓		✓	inspiration (1:1)	✓		
14	obtain (1:1)				quit (1:1)	✓			misery (1:1)	✓		
15	bio-physicist (1:1)	✓	✓		supporting (1:1)	✓			offspring (1:1)	✓	✓	
16	polymer (1:1)	✓	✓		ultimately (1:1)	✓		✓	pigeon (2:1)	✓	✓	
17	purify (1:1)		✓						policy (1:1)			✓
18	spiral (1:1)	✓							potential (1:1)	✓		✓
19	structural (1:1)	✓		✓					publicly (1:1)	✓		
20	theoretical (1:1)	✓		✓					publish (3:1)	✓		
21	tin (1:1)	✓							relentless (1:1)	✓		
22	x ray (2:2)		✓						replicate (1:1)		✓	
23									reproduce (2:2)	✓	✓	
24									trait (3:1)	✓	✓	
25									unconsciously (2:1)	✓		
26									vulnerable (1:1)	✓	✓	
27									withstand (1:1)	✓	✓	

Appendix B

An Example of Reading Material

What Is the Structure of DNA?

The structure of DNA was deciphered only after many types of experimental evidence and theoretical considerations were considered together. The crucial evidence was obtained by *X-ray crystallography*. Some chemical substances, when they are isolated and purified, can be made to form crystals. The positions of atoms in a crystallized substance can be inferred from the pattern of diffraction of X-rays passed through it. The attempt to characterize DNA would have been impossible without the crystallographs prepared in the early 1950s by the English chemist Rosalind Franklin. Franklin's work, in turn, depended on the success of the English biophysicist Maurice Wilkins, who prepared a sample containing very uniformly oriented DNA fibers. These DNA preparations provided samples for diffraction that were far better than previous ones, and the crystallographs Franklin prepared from them suggested a spiral or helix.

The chemical composition of DNA was known

The chemical composition of DNA also provided important clues to its structure. Biochemists knew that DNA was a polymer of nucleotides. Each nucleotide of DNA consists of a molecule of the sugar deoxyribose, a phosphate group, and a nitrogen-containing base. The only differences among the four nucleotides of DNA are their nitrogenous bases: the purines adenine (A) and guanine (G), and the pyrimidines cytosine (C) and thymine (T).

In 1950, Erwin Chargaff at Columbia University reported some observations of major importance. He and his colleagues found that DNA from many different species - and from different sources within a single organism - exhibits certain regularities. In almost all DNA, the following rule holds: The amount of adenine equals the amount of thymine ($A = T$), and the amount of guanine equals the amount of cytosine ($G = C$). As a result, the total abundance of purines ($A + G$) equals the total abundance of pyrimidines ($T + C$). The structure of DNA could not have been worked out without this observation, now known as Chargaff's rule, yet its significance was overlooked for at least three years.

Watson and Crick described the double helix

The solution to the puzzle of the structure of DNA was accelerated by *model building*: the assembly of three-dimensional representations of possible molecular structures using known relative molecular dimensions and known bond angles. This technique, originally exploited in structural studies by the American biochemist Linus Pauling, was used by the English physicist Francis Crick and the American geneticist James D. Watson, then both at the Cavendish Laboratory of Cambridge University.

Watson and Crick attempted to combine all that had been learned so far about DNA structure into a single coherent model. The crystallographers' results convinced Watson and Crick that the DNA molecule is helical. The results of density measurements and previous model building suggested that there are two polynucleotide chains in the molecule. Modeling studies had also led to the conclusion that the two chains in DNA run in opposite directions - that is, that they are antiparallel.

In late February of 1953, Crick and Watson built a model out of tin that established the general structure of DNA. This structure explained all the known chemical properties of DNA, and it opened the door to understanding its biological functions. There have been minor amendments to that first published structure, but its principal features remain unchanged.

Source: LIFE: The Science of Biology, p.238

Appendix C

An Example of a Transcript for the RL Group

What is the Structure of DNA?

A combination of theoretical ideas and experimental evidence were crucial to the discovery of the structural features of DNA.

By the late 1940s, biochemists understood the chemical composition of DNA. It was a very long polymer made of simple units called nucleotides. Each nucleotide had a backbone made of sugar and phosphate molecules. In other words, the sugar of one nucleotide is joined to the phosphate of the next. Attached to each sugar was one of four types of molecules, called nitrogenous bases: adenine (A), guanine (G), cytosine (C,) and thymine (T). A and G are purines and C and T are pyrimidines.

In 1950, a biochemist named Erwin Chargaff, discovered the percentage of the bases A and T was the same, and the percentage of the bases G and C was the same. That is, the total abundance of purines equals the total abundance of pyrimidines. This discovery is known as Chargaff's rule.

A short time later, Rosalind Franklin a biophysicist, attempted to characterize DNA. Franklin had discovered that DNA could crystallize in two different forms, A and B. She also found a way to separate the forms. When a crystal that is made of a purified chemical substance is put under x-rays, it produces a pattern. Thus, by using x-rays, Franklin could obtain information about the molecular structure of DNA. It had a spiral pattern.

Next, a geneticist, James Watson, and a physicist, Francis Crick, attempted to combine all that was known about the structure of DNA. They wanted one coherent model. Franklin's results along with density measurements and model-building had helped to convince them that DNA was a double helix. Based on this, they assembled a tin model of the molecular structure of DNA. From that point, scientists' understanding of the functions of DNA rapidly accelerated.

[300]

Appendix D
An Example of Vocabulary Enhancing Exercises

A. Look at the list of words from the reading. Match each one with a definition on the right.

- | | | | |
|---|-------------|---|--|
| 1 | spiral | a | the combination of parts or elements that make up something |
| 2 | obtain | b | the simplest unit of a chemical substance, usually a group of two or more atoms (molecular = adjective form) |
| 3 | molecule | c | a shape or design, consisting of a continuous curved line that winds around a center or pole and gradually receding from or approaching it |
| 4 | assembly | d | to gain or attain usually by planned action or effort |
| 5 | composition | e | the process of putting together the parts of a machine or structure |

B. Now complete the sentences below using the vocabulary from the above column. Be sure to use the correct form of each word.

- 1 An elegant () staircase led people from the ground floor to a sun parlor.
- 2 He studies the chemical () and function of saliva.
- 3 Researchers have () the first recordings of brain-cell activity in an actively flying fruit fly.
- 4 To begin the study of structural biology, we will first learn about common biological ().
- 5 The () of these microsystems was performed right in front of us.

C. Translate the Japanese words into the English vocabulary from the reading.

- | | | | | | |
|---|----|---|------|---|----|
| 1 | 分子 | 2 | 組み立て | 3 | 得る |
| 4 | 組成 | 5 | らせん | | |

D. Rearrange the order of the words to make a complete sentence.

- 1 and then shipped / are made / in this factory / for assembly / to another country / the parts
- 2 the chemical composition / I / study / of / stomach fluid

Appendix E
Modified Vocabulary Knowledge Scale (Sample)

For (1) and (2), check if you the statement is true for you. For (3), give the meaning of the word/phrase in either English or Japanese. For (4), write a sentence using the word/phrase.

まず、それぞれの単語について（１）から（３）までの何れかを選びなさい。（３）を選んだ場合、可能なら（４）にすすみなさい。（３）は日本語でも構いません。（４）も積極的に書くようにしてください。

1. ADEQUATE

- (1) I don't remember having seen this word before.
- (2) I have seen this word before, but I don't know what it means.
- (3) I know this word. It means
- (4) I can use this word in a sentence.

2. COMMON SENSE

- (1) I don't remember having seen this word before.
- (2) I have seen this word before, but I don't know what it means.
- (3) I know this word. It means
- (4) I can use this word in a sentence.

Questioning the Stability of Learner Anxiety in the Ability-Grouped Foreign Language Classroom

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Abstract

This study explores the change of language anxiety in the ability-grouped foreign language classroom over time. Subjects of the study consisted of university EFL freshmen divided into three proficiency levels. The findings revealed that at the initial stage of grouping, students placed in the high proficiency level had significantly lower language anxiety than those grouped into the low and average levels; the differences in anxiety levels between the latter two groups were insignificant. Over the course of the study, the low- and average-performing students still remained homogeneous in terms of their anxiety level. High-achieving students also continued to have significantly lower anxiety levels than their counterparts. However, it is important to note that regardless of the proficiency levels, learner anxiety significantly diminished for all three groups of students in the ability-grouped learning context. Even the discrepancy in anxiety levels between low- and high-achieving students decreased over time. Throughout the entire study, the most distinct differences in anxiety levels between the two proficiency groups were identified in: (1) a stronger feeling of tension in English classes than in other classes, (2) a feeling of nervousness and uneasiness when speaking English in class, and (3) worry about being laughed at when speaking English. Additionally, the findings

indicated that the students were mostly in favor of ability grouping, and the majority of them agreed that this practice was beneficial to their language learning.

Keywords: language anxiety, language learning, ability grouping

Introduction

Many previous studies have revealed the prevalence of language anxiety in American foreign language classrooms (Aida, 1994; Horwitz, Horwitz & Cope, 1986; Marcos-Llinás & Garau, 2009; Onwuegbuzie, Bailey & Daley, 2000b; Saito & Samimy, 1996), as well as in those in the EFL settings of Asian countries such as Korea (Kim, 2000; Kim, 2009), Japan (Williams & Andrade, 2008), and Taiwan (Chan & Wu, 2004; Jen, 2003). In light of this, there has been a call for more research on the affective needs of language learners. In an EFL setting such as the one in Taiwan, there is very limited use of the target language and little contact with native speakers in daily activities. The only opportunities for most students to practice English exist in the language classroom. Additionally, there is generally great variation in language proficiency (Liu, 2010) and low motivation (Ho, 1998) among students in this environment. Thus, for various reasons, students can be easily susceptible to different levels of language anxiety when learning the language.

Teaching a foreign language to mixed-ability groups is challenging for instructors and sometimes ineffective. To cope with the heterogeneous nature of competence in language classrooms, grouping students into classes of similar ability levels for English instruction has become a widely accepted practice throughout higher education institutions in Taiwan. It is hoped that this arrangement will have beneficial effects on language learning, as it allows teachers to adapt the course content to students' affective needs more easily and effectively. As suggested by Dörnyei (2001), a strategy to help keep language learners motivated is to minimize the level of language anxiety in the learning environment; otherwise, feelings of tension, nervousness, worry, and frustration may hinder learners from achieving their goals successfully (Horwitz, Horwitz & Cope, 1986). Although the role of anxiety in language learning has been extensively examined in a number of studies (Aida 1994; Ganschow & Sparks, 1996; Liu, 2012; MacIntyre, Noels & Clément, 1997; Wei, 2007), there has been relatively little discussion about this psychological construct in an ability-grouped context. Therefore, this study seeks to augment the understanding of language anxiety, particularly in terms of its stability and link to foreign language proficiency in a homogeneously grouped classroom setting.

The stability issue of language anxiety has been a major concern in a few prior studies, including those by Rodríguez and Abreu (2003) and Kim (2009), which were both conducted in the EFL context but reached inconsistent conclusions. Nevertheless, it should be noted that while Rodríguez and Abreu (2003) investigated the stability of foreign language anxiety across two different foreign languages: English and French, Kim (2009) examined the stability of language anxiety across two different classroom contexts (conversation and reading). While the researchers of the former study found language anxiety to be stable across different languages, Kim concluded that foreign language anxiety failed to remain stable across different instructional contexts, with students in the conversation course exhibiting higher anxiety levels than their counterparts in the reading course. In light of the stability issue in prior research, this study intended to achieve a fuller understanding of the stability of foreign language anxiety. However, the focus of the research centered on the stability of language anxiety in an ability-grouped learning context over time.

Literature Review

Language Anxiety

Language anxiety has been one of the most studied affective variables (Horwitz, 2001; Marcos-Llinás & Garau, 2009). Among the various types of anxiety identified by MacIntyre and Gardner (1991a) — trait anxiety, state anxiety, and situation specific anxiety — language anxiety refers to the third type and is defined as “the apprehension experienced when a situation requires the use of a second language with which the individual is not fully proficient” (Gardner & MacIntyre, 1993, p. 5). Horwitz, Horwitz and Cope (1986) considered listening and speaking tasks as two major sources of anxiety in language learning and devised the widely acclaimed Foreign Language Classroom Anxiety Scale (FLCAS). They determined language anxiety to be highly relevant to three constructs: communication apprehension, fear of negative evaluation, and test-anxiety. Similarly, “low self-confidence in speaking English” and “general English classroom performance anxiety” were identified as two principal FLCAS components in by Cheng, Horwitz and Schallert (1999, p. 426). It is worth noting that MacIntyre and Gardner (1994) proposed a three-stage anxiety model which indicated that language anxiety does not only affect language learning at the “output” stage, but can also negatively affect learners during the “input” and cognitive “processing” stages (p. 286). Anxiety at the input stage denotes the apprehension foreign language learners initially experience when they are presented with a new word or sentence. At this stage, “attention, concentration, and encoding occur” (ibid., p. 286). Anxiety during the processing stage

represents the apprehension learners experience when they intend to organize and store input. Finally, anxiety at the output stage is associated with learners' ability to produce (e.g., to speak or write in the foreign language) based on what they have learned in previous stages. Onwuegbuzie, Bailey and Daley (2000a) reported higher levels of anxiety at the output stage among their subjects, whereas anxiety at the input stage contributed the most to the prediction of the general type of foreign language anxiety.

The negative association between learner anxiety and language performance has also been reported in a considerable body of research (Aida, 1994; Ganschow & Sparks, 1996; MacIntyre & Gardner, 1989, 1991a, 1991b; Marcos-Llinás & Garau, 2009; Onwuegbuzie, Bailey & Daley, 1997; Phillips, 1992; Wang, 2010; Wei, 2007). Aida (1994) examined language anxiety among American university students learning Japanese as a foreign language and reported that learners tended to have lower school grades when they possessed a higher level of anxiety. Saito and Samimy (1996) also examined the link between anxiety and foreign language performance among university students enrolled in three different levels of Japanese courses: beginning, intermediate, and advanced. Their results indicated that "Language Class Anxiety" was significantly and inversely related to final grades in all three levels (ibid, p. 243) and further served as the best predictor for the grades of learners in the intermediate and advanced levels. Examining language anxiety among elementary school EFL children in Taiwan, Chan and Wu (2004) again reported a negative relationship between students' language performance and their anxiety level. Speaking in front of others and incomprehensible input were determined to be two of the most anxiety-evoking sources.

While anxiety has continuously been shown to have a deleterious impact on language performance, it can also affect many other aspects of language learners, e.g. their self-confidence (Cheng, Horwitz & Schallert, 1999) and perceived difficulty of a learning task (Saito, Horwitz & Garza, 1999). However, as Yan and Horwitz (2008) asserted, its influence on language learning does not function independently. Previous research has revealed its connection with other variables, such as motivation (Gardner, Day & MacIntyre, 1992; Gardner & MacIntyre, 1993; Liu, 2010) and perceived competence (MacIntyre, Baker, Clément & Donovan, 2002; MacIntyre & Charos, 1996; MacIntyre, Noels & Clément, 1997). Based on an interview of 21 Chinese students, Yan and Horwitz (2008) identified 10 variables that directly or indirectly interact with foreign language anxiety and language achievement: regional differences, test type, gender, teacher characteristics, class arrangement, parental influence, language aptitude, comparison with peers, learning strategies, and interest and motivation. It should be noted that the findings of this qualitative study appeared to conform

to some of those done by Horwitz, Horwitz and Cope (1986), in which it was determined that language anxiety has an inverse association with language achievement. However, Yan and Horwitz's study was unique not only because the findings identified the interrelationships between the many factors related to both language anxiety and achievement, but also because they were based on student perception instead of the researchers' interpretations of learner responses.

Anxiety in the language classroom is complex in nature. MacIntyre (1999) reported that language anxiety may negatively affect student self-perceived proficiency, whereas Young (1991) claimed that self-perceived low ability is very likely to provoke language anxiety. Saito, Horwitz and Garza (1999) argued that there is an association between anxiety and the perceived difficulty of a learning task although it is difficult to determine whether anxiety is the cause or the effect. Anxiety may affect language learners in different ways and can be caused by a multitude of sources. The direction of causation between anxiety and language performance, however, is still uncertain (Cheng, Horwitz & Schallert, 1999; Ganschow & Sparks, 1996; Kim, 2009; Yan & Horwitz, 2008).

A more recent trend in anxiety studies has prompted the attempt to gain insights into language skill-specific anxiety, such as speaking anxiety (Woodrow, 2006), reading anxiety (Saito, Horwitz & Garza, 1999; Wu, 2011), writing anxiety (Cheng, 2002; Cheng, Horwitz & Schallert, 1999), and listening comprehension anxiety (Cheng, 2005; Kim, 2000; Wang, 2010). The negative effects of these anxieties on learner performance have also been ascertained by research findings (Saito, Horwitz & Garza, 1999; Vogely, 1998). In an investigation of anxiety among students enrolled in different foreign language courses, Saito, Horwitz and Garza (1999) developed the Foreign Language Reading Anxiety Scale (FLRAS) specifically for measuring reading anxiety. A significant relationship was found between the general type of language anxiety measured by the FLCAS and the specific reading anxiety measured by the FLRAS ($r = .64$). Another study conducted by Cheng, Horwitz and Schallert (1999) also measured two types of anxiety, general classroom anxiety and more specific writing anxiety, and found a significant correlation between them ($r = .64$). Their findings revealed that variables associated with writing anxiety were more related to students' writing performance; however, all of the anxiety variables were significantly and negatively correlated with both English writing and speaking course grades. Cheng, Horwitz and Schallert (1999) pointed out that closer investigation into language skill-specific anxiety helps foster the understanding of learner anxiety problems more precisely, and furthermore, it not

only benefits the development of effective interventions, but is also a desirable trend in future research.

Ability-Grouping Practice

The question of whether students should be assigned to classes heterogeneously or by ability has drawn researchers' attention for a long period of time. According to Kulik and Kulik (1992), research on ability grouping can date back to about a century ago. An extensive amount of studies have been carried out since the 1920s; nonetheless, findings about the effects of ability grouping are still inconclusive (Kulik, 1992; Hoffer, 1992). There have been arguments supporting ability grouping (Kulik, 1992; Loveless, 1999; Rogers, 1993, 2002) and arguments opposing the practice (Braddock & Slavin, 1992; Johnson & Johnson, 1992; Oakes, 1985; Slavin, 1991). The inconsistencies in the findings are due to different reasons, e.g. misplacement of students, teaching attitudes, and forms of grouping (Hoffer & Gamoran, 1993; Ireson, Hallam & Hurley, 2005; Kulik, 1992). Fuligni, Eccles and Barber (1995) contended that one reason for the inconsistencies is due to the fact that most researchers examined the effects of ability grouping only over a short term. A longer term of investigation is needed for research on ability grouping.

The advantages and disadvantages of ability grouping have been discussed in considerable studies (Braddock & Slavin, 1992; Figlio & Page, 2002; Gamoran, Nystrand, Berends & LePore, 1995; Kulik & Kulik, 1982; Loveless, 1998; Slavin, 1990). Supporters of ability grouping claim that the grouping practice helps teachers to better tailor the content and pace of instruction to different student needs. For example, they can provide more attention and reinforcement to lower achievers. As for higher achievers, they can provide more challenging and difficult materials. On the contrary, opponents argue that teachers who teach low achievers are more likely to have lower expectations for students, which increases the chance students receive a lower quality of instruction. Further to this, lower achievers in homogeneous groups may be deprived of the example and stimulation provided by high achievers (Slavin, 1990). According to Hallinan (1994) and Slavin (1993), the concern that keeps this topic under intense debate centers on two issues: effectiveness and equity. The former concern is about whether teaching is more effective in the homogeneously grouped context. The latter is about whether all students, not a certain group of students, benefit from the arrangement.

Research on ability grouping in western countries is mainly focused on investigating the impact of the practice on academic performance (Ireson, Hallam & Hurley, 2005; Slavin,

1990, 1993) and self-concept or self-esteem (Ireson, Hallam & Plewis, 2001; Marsh, Chessor, Craven & Roche, 1995; Wong & Watkins, 2001), or both (Cheung & Rudowicz, 2003; Kulik & Kulik, 1982), while most studies on ability grouping in the Taiwan setting concern students' attitudes toward the practice in the foreign language classroom (Chen, Lin & Feng, 2004; Cheng & Shih, 2007; Sheu & Wang, 2006; Tsao, 2003; Yu, 1994). As mentioned previously, little research has been conducted concerning anxiety in a homogeneously grouped setting.

Rationale for the Study

Since learner anxiety has been found to be inversely related to language performance (Liu, 2012; Saito & Samimy, 1996; Sánchez-Herrero & Sánchez, 1992), providing a non-threatening learning environment is imperative to reduce anxiety levels to a minimum level (Oxford & Shearin, 1994), especially when there is often a distinct discrepancy between the language performance of high achievers and low achievers in the EFL context, such as in the language classrooms of Taiwan. MacIntyre, Noels and Clément (1997) suggested that students who experience apprehension in the language class are likely to undervalue their academic ability, which may exert a debilitating impact on motivation and eventually on language acquisition. The present study aims to create more insights into the association between foreign language anxiety and an instructional context by placing students into similar ability groups for EFL instruction and investigating whether language anxiety significantly changes over time. It is also hoped that the findings can contribute to research on the stability issue of foreign language anxiety and further provide some practical implications for language instructors.

Research Questions

According to Yan and Horwitz (2008), various factors, such as class arrangement, comparison with classmates and language achievement may all interact with foreign language anxiety. The purpose of the study, therefore, is to provide a more in-depth understanding of this dynamic variable by addressing the following research questions:

1. Are there any significant differences in learner anxiety among students of different language proficiency levels?
2. Does learner anxiety significantly change over time in an ability-grouped learning context?

3. What are the top five greatest differences in learner anxiety between low- and high-achieving groups?

4. Do students with different anxiety/proficiency levels have significant differences in attitude towards the homogeneous grouping practice?

Methodology

Participants

Participants in the study consisted of two freshman classes from each of the three different English ability levels at one university in central Taiwan. These students had different majors, but they were grouped for English classes according to their scores on the General English Proficiency Test (GEPT). The GEPT is a well-recognized and commonly used test to measure English proficiency in Taiwan. All subjects were required to take the reading and listening sections (40 and 45 items, respectively) of the GEPT as soon as they entered the university.

During the course of the study, all participants took the required first-year English courses, which were four hours a week and designed to train them in basic language skills. The instrument for measuring learner anxiety, FLCAS, was first administered a few weeks after the beginning of the fall semester (time 1), and then, during the spring semester, several weeks after the midterm exam week (time 2), it was administered again. In addition, to provide more insight into learner attitudes toward the practice of homogeneous grouping and its effect on language anxiety, another 14-item questionnaire was administered to the sample before the end of the second semester.

A total of 208 students were involved in the study; however, only the data of those who were present and responded to the questionnaires during the two administration periods were included for further statistical analyses. Table 1 displays the number and percentages of the remaining 143 participants from each ability level.

Table 1: Number and percentages of subjects of different ability levels

	Low	Intermediate	High	Total
Male	18 (56.3%)	27 (51.9%)	17 (28.8%)	62 (43.4%)
Female	14 (43.8%)	25 (48.1%)	42 (71.2%)	81 (56.6%)
Total	32	52	59	143

Instruction

Although the participants from different ability levels had different English teachers, they all used the same series of textbooks. During each semester, the amount of class time spent on listening and speaking was two hours a week for a total of 16 weeks. Similarly, the amount of time spent on reading and writing in class was two hours a week. Grouping students into English classes of different proficiency levels, ranging from basic to advanced, ensured that students were placed at the level most appropriate for their language competence. The instructional practice was designed to (1) allow every teacher to adapt the course content to the class's pace and accommodate students' affective needs more effectively and (2) provide every learner with a more friendly learning environment.

Instrument

The instrument employed to assess language anxiety was adapted from Horwitz, Horwitz and Cope's (1986) Foreign Language Classroom Anxiety Scale (FLCAS), which consists of 33 items that evaluate communication apprehension, fear of negative evaluation, and test anxiety. This questionnaire was translated into Chinese and responses for the items were measured on a six-point Likert scale (1 = strongly disagree; 2 = disagree; 3 = slightly disagree; 4 = slightly agree; 5 = agree; 6 = strongly agree). The instrument's reliability was satisfactory, achieving an alpha coefficient of .95.

To examine the students' attitudes toward the implementation of ability grouping in the language classroom, a 14-item questionnaire rated on a 6-point Likert scale was devised. The 14 items were developed in the current research with reference to questionnaires used in other studies in Taiwan (Chen, Lin & Feng, 2004; Yu, 1994). The reliability of the instrument, as determined by Cronbach's alpha, was .93.

Data Analysis

In order to determine whether students of different proficiency levels had significantly different foreign language anxiety levels at the initial stage of the ability-grouping practice, one-way analysis of variance (ANOVA) was first performed on the pre-test anxiety scores. Next, in order to examine the stability of language anxiety over time, ANOVA for repeated measures was conducted on the data, using pre- and post-test anxiety scores as the dependent variables and proficiency level as the independent variable. To gain a better understanding of the differences in learner anxiety between the low- and high-ability groups, multivariate analysis of variance (MANOVA) was employed to analyze the pre- and post-test anxiety item

scores. The Scheffe post-hoc test was then performed to examine whether the low- and high-level proficiency groups responded to the statements about anxiety differently.

Finally, one-way ANOVA was performed on the total scores from the attitude questionnaire, using anxiety level and proficiency level as the independent variables to ascertain whether there were significant attitude differences toward homogeneous grouping among students of different anxiety or proficiency levels. Percentages from the student responses on the attitudes assessment were also examined. Classification of students into three different anxiety levels was determined by their post-test anxiety scores: the lowest 25% (ranging from 51 to 104), the highest 25% (ranging from 131 to 186), and the middle 50% of the full sample. It should be noted that all the reverse-worded items in the questionnaires were recoded before any of the statistical analyses was conducted. A higher item score denoted a response in the affirmative direction; for example, a higher anxiety score signified the existence of some level of the construct.

Results and Discussion

The means and standard deviations of the pre- and post-test scores of the FLCAS were first calculated and the results are presented in Table 2. Since the anxiety items were rated on a 6-point Likert scale, the total possible scores on the 33-item anxiety scale ranged from 33 to 198, with a higher score representing a higher level of language anxiety. Students who responded “slightly disagree” to any anxiety statement received an item score of 3. If they responded “slightly agree” to any item, however, they obtained an item score of 4. With a total of 33 items on the instrument, it is reasonable to assume any total score above 99 signifies an elevated level of anxiety. The descriptive statistics of the data appeared to be consistent with the results from previous studies, carried out either in the Taiwanese context (Chan & Wu, 2004; Cheng, Horwitz & Schallert, 1999; Jen, 2003) or in other EFL contexts (Awan, Azher, Anwar & Naz, 2010; Wang, 2010; Williams & Andrade, 2008; Zhao, 2007) that supported the presence of language anxiety.

Additionally, similar to the findings of Kim (2000) and Chen and Chang (2004), student anxiety scores tended to become higher as proficiency level decreased. The increase in language anxiety was apparent at both the beginning and end of the first-year ability-grouping practice. It was also apparent that the subjects’ level of language anxiety decreased over time in the ability-grouped EFL context.

Table 2: Means and standard deviations of pre- and post-test anxiety scores from subjects with different levels of English proficiency

Learner Anxiety	Low		Intermediate		High		Full Sample	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Pre-test	149.28	21.91	144.50	20.24	123.00	21.88	136.70	24.15
Post-test	128.16	24.89	122.62	26.77	111.20	19.59	119.15	24.46

Differences in Anxiety at the Initial Stage of Grouping

To determine the statistical significance of differences in language anxiety among students with different proficiency levels at the initial stage of the ability grouping, ANOVA was performed on the pre-test anxiety scores (see Table 3). The results revealed that the differences were highly significant ($F(2,140) = 21.27, p < .01$).

Table 3: Analysis of variance results of pre-test anxiety scores from subjects with different levels of English proficiency

	Sum of Squares	df	Mean Square	<i>F</i>	<i>p</i>
Between Groups	19302.60	2	9651.30	21.27	.000**
Within Groups	63537.47	140	453.84		
Total	82840.07	142			

** $p < .01$

The Scheffe follow-up test further illustrated that high-proficiency students had significantly lower language anxiety than their counterparts in the average or below-average level. However, the anxiety levels between the latter two groups were not significantly different; both groups actually had rather high anxiety levels. These findings are inconsistent with those of Marcos-Llinás and Garau (2009) and Saito and Samimy (1996), whose research found a higher anxiety level in advanced-level students rather than in beginners. The results also contradict those of Onwuegbuzie, Bailey and Daley (1999), who found insignificant differences in the level of foreign language anxiety among students in the three different instructional levels.

Stability of Anxiety over Time

In order to investigate the stability of language anxiety over the one-academic-year study period, repeated measure analysis was performed on the pre- and post-test anxiety scores with

proficiency level used as the between-subject factor (see Table 4). The findings indicated that over time, learner anxiety significantly changed in the language classroom ($F(1,140) = 124.40, p < .01$). A level effect was also found to be significant in the analysis ($F(2,140) = 14.77, p < .01$). These results are consistent with those of Wu (2011), who revealed that foreign language anxiety significantly changed during the semester, but inconsistent with those of Casado and Dereshiwksy (2001), who reported that foreign language anxiety did not decrease when they compared students in a first-semester Spanish class with those near the end of their second semester (the subjects of the first and second semesters were two different groups of students).

Table 4: Results of repeated measures analysis of pre- and post-test anxiety scores by levels of English proficiency

Source of Variation	Sum of Squares	df	Mean Square	<i>F</i>	<i>p</i>
Between Subjects					
Level	24578.94	2	12289.47	14.77	.000**
Error	116512.37	140	832.23		
Within Subjects					
Anxiety	22272.92	1	22272.92	124.40	.000**
Anxiety x Level	1669.50	2	834.75	4.66	.011 *
Error	25065.18	140	179.04		

* $p < .05$; ** $p < .01$

Scheffe post hoc test results showed that students with higher levels of proficiency scored significantly lower on the anxiety scale than those in the other two ability levels during the course of the study, which indicated that proficiency level had a significant effect on foreign language anxiety. Due to a significant interaction between language anxiety and proficiency level, a paired-samples *t* test was further conducted to examine the changes in anxiety within each ability level (see Table 5). The findings showed a significant drop in language anxiety for each ability level from time 1 to time 2 (see Figure 1). There is an apparent lack of stability for this variable in the ability grouping context.

Table 5: Paired-samples *t*-Test results of pre- and post-test anxiety scores by different levels of English proficiency

Level	Mean Difference	df	<i>t</i>	<i>p</i>
Basic	21.13	31	6.42	.000**
Intermediate	21.88	51	7.40	.000**
High	11.80	58	5.42	.000**

***p*<.01

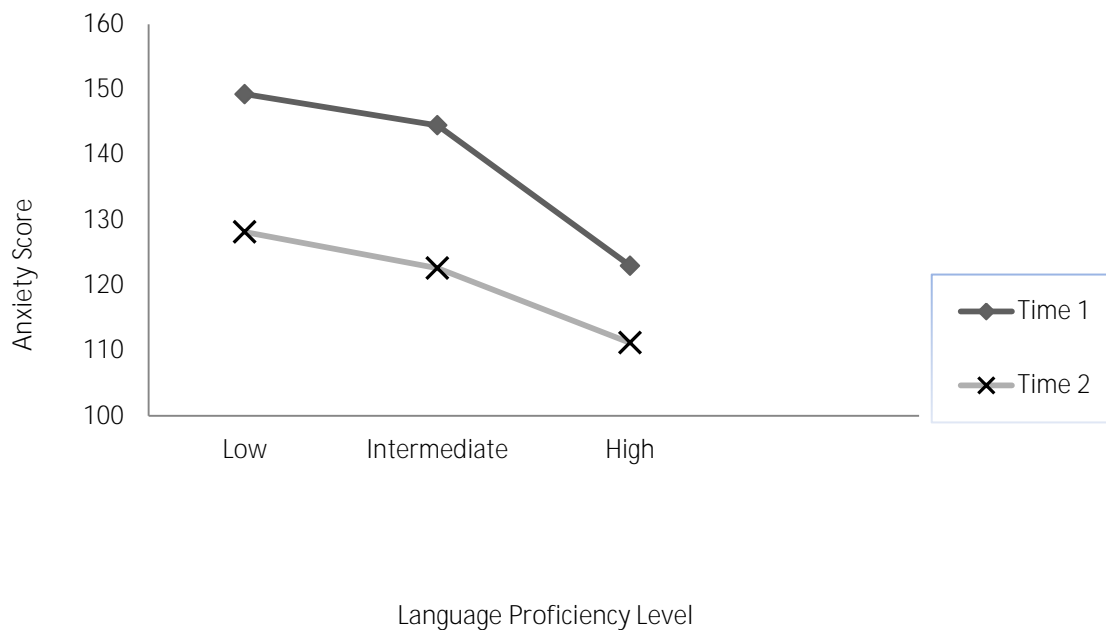


Figure 1: Means of Anxiety Scores for Each Ability Group at Time 1 and Time 2

Discrepancies between Low- and High-Ability Groups

To provide insights into the differences in language anxiety among students in the low- and high-proficiency groups, MANOVA was used to analyze the anxiety item scores. Significant differences were found for the majority of the 33 FLCAS items at time 1; however, the number of significant differences was reduced to about one third at time 2. The Sheffe post-hoc test results showed that the number of homogenous subsets based on the item scores from the low- and high-ability groups increased from 7 at time 1 to 23 at time 2. As the differences in item means indicate (see Table 6), the discrepancy in language anxiety between these two groups diminished over time.

Table 6: The top five greatest differences in language anxiety between low- and high - proficiency level groups

Time /Item No.	Item Description	Mean		
		Low (%)	High (%)	Difference
Time 1				
17	I often feel like not going to my English class.	4.66 (87.5)	2.97 (32.2)	1.69
27	I feel nervous and uneasy when I have to speak English in my English class.	4.81 (90.6)	3.32 (44.1)	1.49
26	I feel more tense in my English class than in my other classes.	4.69 (81.3)	3.39 (44.1)	1.30
30	I feel overwhelmed by the number of rules I have to learn to speak English.	4.88 (87.5)	3.59 (54.2)	1.28
31	I worry that other students will laugh at me when I speak English.	4.44 (75.0)	3.22 (44.1)	1.22

-				
Time 2				
1	I never feel very confident when I am speaking English in class.	4.44 (84.4)	3.42 (54.2)	1.01
12	In my English class, I forget things I know when I get nervous.	4.09 (71.9)	3.10 (32.2)	0.99
26	I feel more tense in my English class than in my other classes.	3.91 (75.0)	2.98 (27.1)	0.92
31	I worry that other students will laugh at me when I speak English.	3.50 (53.1)	2.64 (16.9)	0.86
27	I feel nervous and uneasy when I have to speak English in class.	3.75 (62.5)	2.92 (27.1)	0.83

Note. Numbers in () are percentages of learners showing agreement with the statement

Table 6 also displays the greatest significant discrepancies in anxiety scores between low- and high-performing students at time 1 and time 2. It should be noted that student responses to anxiety items 26, 27 and 31 reflected the great differences between the groups not only at the beginning, but also at the end of the ability grouping. Since each item score ranged from 1 to 6, an average item score above 3 would indicate the presence of learner

anxiety. Taking the responses to item 26 as an example, at time 1, the item mean of the low-ability group was 4.69, as compared to the mean 3.39 for the high-ability group. Over time, the item means dropped to 3.91 and 2.98 for the low- and high-ability groups, respectively. Further analysis of the percentages of the responses showed that at time 1, 81.3% of the low-ability group had a varying degree of agreement to the statement asking whether they felt more tension in English class than in other classes, while about only less than half of the percentage of the high-ability group (44.1%) agreed to this statement. At time 2, 75% of the low-ability group gave positive ratings to the same item, whereas the percentage of the high-ability group who gave positive ratings was reduced to 27.1%. Similarly, while an overwhelming majority (90.6%) of the low-ability students expressed uneasiness about speaking English in class at time 1, about 44% of their high-ability counterparts responded affirmatively to the same statement (item 27). At time 2, 62.5% of the low-proficiency students and only about 27% of the high-proficiency students gave affirmative ratings to the same item.

In sum, during the entire study, low-proficiency students continued to exhibit a substantially higher level of learner anxiety than their high-proficiency counterparts mostly due to apprehension about their English speaking ability and negative evaluation from their peers. It is therefore beyond doubt that these students tended to feel more tension in English class than in other classes. Nonetheless, the feeling of tension, uneasiness, and nervousness in each ability group not only decreased over time, but the discrepancy in anxiety level between the two proficiency groups also declined when they were grouped into a class of students with similar ability.

Learner Attitudes toward Ability Grouping

Table 7 presents the results of one-way ANOVA on student attitudes scores, with anxiety and proficiency levels as the independent variables. The results revealed that there were no significant differences in attitudes toward ability grouping among students of different proficiency levels. The differences in attitudes among students of varying anxiety levels were also found to be non-significant. Further examination of the percentages of student responses indicated that overall, the majority of the students were in favor of the grouping arrangement (see Table 8), with about 80% of the subjects considering this kind of arrangement to be beneficial to their English learning. 65% of the EFL learners confirmed that the ability-grouped context helped them feel less pressure, and about 70% of them felt more at ease and less nervous when learning in such an environment. Note that the percentages of

negative and positive responses did not add up to 100% due to missing values in the data file. The present findings corroborated those of Yu (1994), Chen, Lin, and Feng (2004), and Liu (2008), who reported support of ability grouping by the majority of Taiwanese EFL students. Indeed, ability grouping helps language teachers to (1) vary the content and method of instruction more easily and (2) cope with the diversity of student proficiencies more efficiently. At the same time, students can learn a foreign language in a more relaxed environment and feel more comfortable participating in classroom activities.

Table 7: Analysis of variance results of student attitudes toward ability grouping by different anxiety and proficiency levels

Variable	Sum of Squares	df	Mean Square	<i>F</i>	<i>p</i>
Anxiety					
Between Groups	167.40	2	83.70	.62	.542
Within Groups	16736.38	123	136.07		
Proficiency					
Between Groups	12242	2	61.21	.45	.640
Within Groups	16781.35	123	136.43		

Table 8: Percentages and means of the attitude items from the full sample

Item No.	1	2	3	4	5	6	Disagree Subtotal	Agree Subtotal	Mean
							(1 or 2 or 3)	(4 or 5 or 6)	
1. is beneficial to my English learning	3.5	1.4	5.6	32.9	39.9	9.1	10.5	81.8	4.42
2. helps me reduce the pressure of learning English	3.5	6.3	17.5	24.5	36.4	4.2	27.3	65.0	4.05
3. helps me increase my confidence in learning English	3.5	2.8	11.9	34.3	34.3	4.9	18.2	73.4	4.18
4. helps me enhance my motivation in learning	3.5	2.8	11.9	35.7	32.2	6.3	18.2	74.1	4.18
5. helps me relieve the anxious feeling due to learning English	3.5	4.9	20.3	32.2	27.3	3.5	28.7	62.9	4.01
6. is beneficial to the improvement of my listening ability	3.5	2.8	7.0	35.7	35.0	8.4	13.3	79.0	4.31

7. is beneficial to the improvement of my conversation ability	4.2	2.1	10.5	33.6	34.3	7.7	16.8	75.5	4.24
8. is beneficial to the improvement of my reading ability	4.9	2.8	9.8	39.9	29.4	5.6	17.5	74.8	4.11
9. is beneficial to my writing ability	3.5	5.6	16.8	36.4	25.9	2.8	25.9	65.0	3.92
10. feel more at ease when being in the same class of similar ability	3.5	4.9	9.8	30.8	32.9	10.5	18.2	74.1	4.26
11. feel less nervous when being in the same class of similar ability	3.5	2.8	14.7	30.1	32.9	7.0	21.0	69.9	4.18
12. feel being grouped into the level that matches my listening and speaking abilities	5.6	2.8	9.8	35.7	30.8	6.3	18.2	72.7	4.12
13. feel being grouped into the level that matches my reading and writing abilities	4.2	4.2	18.2	25.9	31.5	5.6	26.6	62.9	4.04
14.* prefer being in the same class with students with higher academic competence	4.2	9.1	21.7	36.4	14.7	4.9	55.9	35.0	3.31

Note. 1=Strongly Disagree; 2=Disagree; 3=Slightly Disagree; 4=Slightly Agree; 5=Agree; 6=Strongly Agree; Disagree Subtotal = total percentage of negative responses that included those marked strongly disagree, disagree, or slightly disagree; Agree Subtotal= total percentage of positive responses that included those marked slightly agree, agree, or strongly agree;

*reverse-worded items

Conclusion and Implications

The main purpose of this study was twofold: (1) to examine the stability of language anxiety in the EFL context over time and (2) to investigate the potential effects of ability grouping on language anxiety. The findings indicated that language anxiety exists in the EFL classroom, even after one year of homogeneous grouping. Lower-achieving students had significantly higher language anxiety than their counterparts in other proficiency groups throughout the course of the study. Nevertheless, regardless of proficiency level, the learner anxiety level decreased significantly in the ability-grouped classroom. Important implications can be made from these results.

First, if stability is defined as remaining at the same level over a longer period of time, language anxiety is certainly not a very stable construct in a homogeneously grouped context. As mentioned earlier, some researchers have reported the stability of this variable across

different target languages (Rodríguez & Abreu, 2003), while others have argued about its stability across different classroom contexts, e.g., conversation and reading classes (Kim, 2009). Casado and Dereshiwksy (2001) claimed that foreign language anxiety did not decrease when they compared students taking a foreign language course during the second semester with those in the first semester. Wu (2011) determined that reading anxiety is a more stable construct compared to general language anxiety. Although the word “stability” may be interpreted differently in various studies, researchers seem to agree that learner anxiety plays an influential role in foreign language learning within different contexts and will continue to exist. As concluded by Horwitz, Horwitz and Cope (1986), as long as there is evaluation involved in foreign language learning, anxiety is likely to persist. The present study showed that even though language anxiety cannot be eliminated, it can be controlled. As long as the classroom environment is supportive and encouraging, language anxiety can be reduced. Indeed, researchers such as Vogely (1998) and Young (1999) have offered useful suggestions for helping learners to alleviate language anxiety.

Second, language proficiency does have some impact on learner anxiety. Onwuegbuzie, Bailey and Daley (1999) were of the view that a learner’s expectation of his or her language achievement is the best predictor of foreign language anxiety. It is reasonable to assume that low-ability students have lower expectations of their academic competence in comparison to their higher-ability counterparts and, thus, are more likely to be susceptible to foreign language anxiety. Consistent with the notion of Horwitz, Horwitz and Cope (1986) and MacIntyre and Gardner (1991b), the present findings revealed that the majority of the students with low proficiency agreed that a language class is more likely to evoke anxiety than other courses. Significantly distinct from their higher-ability counterparts, a relatively high percentage of the lower-ability students constantly felt anxious about speaking in front of other classmates over the entire academic year. It is important that instructors help learners counteract this affective obstacle that interferes with their language learning. As MacIntyre, Noels and Clément (1997) suggested, anxious learners are more likely to underestimate their academic competence. Continuous efforts need to be made to provide students with positive experiences, help them build more confidence, and form more realistic expectations of their academic performance (Onwuegbuzie, Bailey & Daley, 1999; Young, 1991).

Third, although the findings were not able to establish a direct link between language anxiety and homogenous grouping, they illustrated that the grouping practice did not have any negative effects on language anxiety. In fact, this study provided some evidence in favor of ability grouping, which is a useful instructional strategy for teachers when trying to manage

anxiety in the foreign language classroom. Dörnyei (2001b) suggested that even the subtle forms of “social comparison” in the classroom may induce anxiety and should be avoided (p.92). Similarly, Yan and Horwitz (2008) revealed that comparison with peers, as well as class arrangement, may directly or indirectly interact with language anxiety to influence learner interest and motivation or language achievement. Prior research has shown that homogeneous grouping may have a positive impact on academic self-confidence (Liu, 2009) and self-concept (Ireson, Hallam & Plewis, 2001) for low-achieving students. High-ability students can also benefit from this type of classroom arrangement when provided with instruction tailored to their needs (Fulgini, Eccles & Barber, 1995; Kulik & Kulik, 1982; Rogers, 2002).

As consistently discovered by Yu (1994) and Liu (2008), EFL students, particularly those in the low-ability level, tended to have positive attitudes toward ability grouping. Even though various other factors may contribute to the reduction of learner anxiety over time as well, it cannot be denied that when implemented appropriately, the benefits of ability grouping can be maximized to help teachers cope with the heterogeneity of student abilities in the classroom, enhancing the effectiveness of instruction and, hopefully, learner interest in the long run.

Limitations

Three limitations of the present study need to be noted. First, the sample was limited to one average university in Taiwan. Since English is taught as a foreign language in this setting, there is a huge variation in language proficiency, even among learners in the same age group. Future research should recruit students from different schools to make the sample more representative of the entire EFL student population.

Second, the sample was restricted to ability-grouped students. Ideally, the effects of ability grouping on language anxiety can be more accurately interpreted if a comparison can be made between a group of students homogeneously grouped and a group of students given instruction in mixed-ability classes within the same school. There was no comparison group in this study, as all of the freshmen were grouped by ability for English instruction as soon as they entered the school.

Third, the participants recruited from classes of three different proficiency levels were taught by three different language instructors. Although the instructional objectives and evaluation criteria were the same, there may have been more or less variation in teaching

related variables such as the use of teaching methods and instructional activities. More effort needs to be made to control the effects of the instruction related variables in future studies.

References

- Aida, Y. (1994). Examination of Horwitz, Horwitz and Cope's construct of foreign language anxiety: The case of students of Japanese. *The Modern Language Journal*, 78(2), 155-168.
- Awan, R.-u.-N. Azher, M., Anwar, M. N. & Naz, A. (2010). An investigation of foreign language classroom anxiety and its relationship with students' achievement. *Journal of College Teaching & Learning*, 7(11), 33-40.
- Braddock, J. H. & Slavin, R. E. (1992). Why ability grouping must end: Achieving excellence and equity in American education. Paper presented at the Common Destiny Conference at Johns Hopkins University. (ERIC Document Reproduction Service No. ED 355 296)
- Casado, M. A. & Dereshiwsky, M.I. (2001). Foreign language anxiety of university students. *College Students Journal*, 35(4), pp. 539-551. Retrieved February 02, 2012, from http://findarticles.com/p/articles/mi_m0FCR/is_4_35/ai_84017191/
- Chan, D. Y. C. & Wu, G. C. (2004). A study of foreign language anxiety of EFL elementary school students in Taipei county. *Journal of National Taipei Teachers College*, 17(2), 287-320.
- Chen, T. Y. & Chang, G. B. Y. (2004). The relationship between foreign language anxiety and learning difficulties. *Foreign Language Annals*, 37(2), 279-287.
- Chen, M. H., Lin, Y. C. & Feng, H. C. (2004). Students' and instructors' perceptions of ability grouping in English listening learning. *Journal of Chang Jung Christian University*, 8(1), 107-123.
- Cheng, Y.-s. (2002). Factors associated with foreign language writing anxiety. *Foreign Language Annals*, 35(5), 647-656.
- Cheng, Y.-s. (2005). EFL learners' listening comprehension anxiety. *English Teaching & Learning*, 29(3), 25-44.
- Cheng, Y.-s., Horwitz, E. K. & Schallert, D. L. (1999). Language anxiety: Differentiating writing and speaking components. *Language Learning*, 49(3): 417-446.
- Cheng, Y. S. & Shih, C. Y. (2007). Evaluation of ability grouping and mixed-ability grouping practices in junior high English class. *Contemporary Educational Research Quarterly*, 15(2), 35-78.

- Cheung, C.-K. & Rudowicz, E. (2003). Academic outcomes of ability grouping among junior high school students in Hong Kong. *The Journal of Educational Research*, 96(4), 241-254.
- Dörnyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge, UK: Cambridge University Press.
- Figlio, D. N. & Page, M. E. (2002). School choice and the distributional effects of ability tracking: Does separation increase inequality? *Journal of Urban Economics*, 51, 497-514.
- Fulgini, A. J., Eccles, J. S. & Barber, B. L. (1995). The long-term effects of seventh-grade ability grouping in mathematics. *Journal of Early Adolescence*, 15(1), 58-89.
- Gamoran, A., Nystrand, M., Berends, M. & LePore, P. C. (1995). An organizational analysis of the effects of ability grouping. *American Educational Research Journal*, 32(4), 687-715.
- Ganschow, L. & Sparks, R. (1996). Anxiety about foreign language learning among high school women. *The Modern Language Journal*, 80(2), 199-212.
- Gardner, R. C., Day, J. B. & MacIntyre, P. D. (1992). Integrative motivation, induced anxiety, and language learning in a controlled environment. *Studies in Second Language Acquisition*, 14, 197-214.
- Gardner, R. C. & MacIntyre, P. D. (1993). A student's contributions to second-language learning. Part II: Affective variables. *Language Teaching*, 26, 1-11.
- Hallinan, M. T. (1994). Tracking: From theory to practice. *Sociology of Education*, 67(2), 79-84.
- Ho, M. C. (1998). Culture studies and motivation in foreign and second language learning in Taiwan. *Language Culture and Curriculum*, 11(2), 165-182.
- Hoffer, T. B. (1992). Middle school ability grouping and student achievement in science and mathematics. *Educational Evaluation and Policy Analysis*, 14(3), 205-227.
- Hoffer, T. B. & Gamoran, A. (1993). Effects of instructional differences among ability groups on student achievement in middle-school science and mathematics. (ERIC Document Reproduction Service No. ED 363 509)
- Horwitz, E. K. (2001). Language anxiety and achievement. *Annual Review of Applied Linguistics*, 21, 112-126.
- Horwitz, E. K., Horwitz, M. B. & Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal*, 70 (2), 125-132.

- Ireson, J., Hallam, S. & Hurley, C. (2005). What are the effects of ability grouping on GCSE attainment? *British Educational Research Journal*, 31, 443-458.
- Ireson, J., Hallam, S. & Plewis, I. (2001). Ability grouping in secondary schools: Effects on pupils' self-concepts. *British Journal of Educational Psychology*, 71, 315-326.
- Jen, C. -Y. (2003). *Anxiety in English language classrooms: An investigation of Taiwanese secondary school students' foreign language anxiety in four classroom contexts*. Unpublished Masters thesis, University of Bristol.
- Johnson, D. W. & Johnson, R. T. (1992). What to say to advocates for the gifted. *Educational Leadership*, 50(2), 44-47.
- Kim, J.-h. (2000). Foreign language listening anxiety: A study of Korean students learning English. Unpublished doctoral dissertation, University of Texas, Austin.
- Kim, S. Y. (2009). Questioning the stability of foreign language classroom anxiety and motivation across different classroom contexts. *Foreign Language Annals*, 42(1), 138-157.
- Kulik, C. -L. C. & Kulik, J. A. (1982). Research synthesis on ability grouping. *Educational Leadership*, 39(8), 619-621.
- Kulik, J. A. (1992). An analysis of the research on ability grouping: Historical and contemporary perspectives. Storrs, CT: National Research Center on the Gifted and Talented, 1992.
- Kulik, J. A. & Kulik, C. -L. C. (1992). Meta-analytic findings on grouping programs. *Gifted Child Quarterly*, 36(2), 73-77.
- Liu, H. J. (2008). An analysis of the effects of ability grouping on student learning in university-wide English classes. *Feng Chia Journal of Humanities and Social Sciences*, 16, 217-249.
- Liu, H. J. (2009). Exploring changes in academic self-concept in ability-grouped English classes. *Chang Gung Journal of Humanities and Social Sciences*, 2(2), 411-432.
- Liu, H. J. (2010). The relation of academic self-concept to motivation among university EFL students. *Feng Chia Journal of Humanities and Social Sciences*, 20, 207-225.
- Liu, H. J. (2012). Understanding EFL undergraduate anxiety in relation to motivation, autonomy, and language proficiency. *Electronic Journal of Foreign Language Teaching*, 9(1), 123-139.
- Loveless, T. (1998). The tracking and ability grouping debate. *Fordham Report*, 2(8), 1-27.
- Loveless, T. (1999). Will tracking reform promote social equity? *Educational Leadership*, 56(7), 28-32.

- MacIntyre, P. D. (1999). Language anxiety: A review of the research for language teachers. In D. J. Young (Ed.), *Affect in foreign language and second language learning: A practical guide to creating a low-anxiety classroom atmosphere*. Boston: McGraw-Hill College.
- MacIntyre, P. D., Baker, S. C., Clément, R. & Donovan, L. A. (2002). Sex and age effects on willingness to communicate, anxiety, perceived competence, and L2 motivation among junior high school French immersion students. *Language Learning*, 52(3), 537-564.
- MacIntyre, P. D. & Charos, C. (1996). Personality, attitudes, and affect as predictors of second language communication. *Journal of Language and Social Psychology*, 15(1), 3-26.
- MacIntyre, P. D. & Gardner, R. C. (1989). Anxiety and second-language learning: Toward a theoretical clarification. *Language Learning*, 39(2), 251-275.
- MacIntyre, P. D. & Gardner, R. C. (1991a). Methods and results in the study of anxiety and language learning: A review of the literature. *Language Learning*, 41 (1), 85-117.
- MacIntyre, P. D. & Gardner, R. C. (1991b). Language anxiety: Its relationship to other anxieties and to processing in native and second languages. *Language Learning*, 41(4), 513-534.
- MacIntyre, P. D. & Gardner, R. C. (1994). The subtle effects of language anxiety on cognitive processing in the second language. *Language Learning*, 44(2), 283-305.
- MacIntyre, P. D., Noels, K. A. & Clément, R. (1997). Biases in self-ratings of second language proficiency: The role of language anxiety. *Language Learning*, 47(2), 265-287.
- Marcos-Llinás, M. & Garau, M. J. (2009). Effects of language anxiety on three proficiency-level courses of Spanish as a foreign language. *Foreign Language Annals*, 42(1), 94-109.
- Marsh, H. W., Chessor, D., Craven, R. & Roche, L. (1995). The effects of gifted and talented programs on academic self-concept: The big fish strikes again. *American Educational Research Journal*, 32(2), 285-319.
- Oakes, J. (1985). *Keeping track: How schools structure inequality*. New Haven, CT: Yale University Press.
- Onwuegbuzie, A. J., Bailey, P. & Daley, C. E. (1997). Foreign language anxiety among college students. Paper presented at the annual conference of the Mid-South Educational Research Association, Memphis, TN. (ERIC Document Reproduction Service No. ED 415 713)

- Onwuegbuzie, A. J., Bailey, P. & Daley, C. E. (1999). Factors associated with foreign language anxiety. *Applied Psycholinguistics*, 20, 217-239.
- Onwuegbuzie, A. J., Bailey, P. & Daley, C. E. (2000a). The validation of three scales measuring anxiety at different stages of the foreign language learning process: The input anxiety scale, the processing anxiety scale, and the output anxiety scale. *Language Learning*, 50(1), 87-117.
- Onwuegbuzie, A. J., Bailey, P. & Daley, C. E. (2000b). Cognitive, affective, personality, and demographic predictors of foreign-language achievement. *The Journal of Educational Research*, 94(1), 3-15.
- Oxford, R. & Shearin, J. (1994). Language learning motivation: Expanding the theoretical framework. *The Modern Language Journal*, 78(1), 12-28.
- Phillips, E. M. (1992). The effects of language anxiety on students' oral test performance and attitudes. *The Modern Language Journal*, 76, 14-26.
- Rodríguez, M. & Abreu, O. (2003). The stability of general foreign language classroom anxiety across English and French. *Modern Language Journal*, 87, 365-374.
- Rogers, K. B. (1993). Grouping the gifted and talented: Questions and answers. *Roeper Review*, 16(1), 8-12.
- Rogers, K. B. (2002). Grouping the gifted and talented: Questions and answers. *Roeper Review*, 24(3), 102-107.
- Saito, Y., Horwitz, E. K. & Garza, T. J. (1999). Foreign language reading anxiety. *The Modern Language Journal*, 83(2), 202-218.
- Saito, Y. & Samimy, K. K. (1996). Foreign language anxiety and language performance: A study of learner anxiety in beginning, intermediate, and advanced-level college students of Japanese. *Foreign Language Annals*, 29(2), 239-351.
- Sánchez-Herrero, S. A. & Sánchez, M. D. P. (1992). The predictive validation of an instrument designed to measure student anxiety in learning a foreign language. *Educational and Psychological Measurement*, 52, 961-966.
- Sheu, C. M. & Wang, P. L. (2006). A case study of student perceptions toward between-class ability grouping in freshman practical English class. *K.U.A.S. Journal of Humanities and Social Sciences*, 3, 111-140.
- Slavin, R. E. (1990). Achievement effects of ability grouping in secondary schools. *Review of Educational Research*, 60(3), 471-499.
- Slavin, R. E. (1991). Are cooperative learning and "untracking" harmful to the gifted? *Educational Leadership*, 48(6), 68-71.

- Slavin, R. E. (1993). Ability grouping in the middle grades: Achievement effects and alternatives. *Elementary School Journal*, 93(5), 535-552.
- Tsao, C. H. (2003). The impact of ability grouping on foreign language learners: A case study. *Hwa Kang Journal of TEFL*, 9, 79-102.
- Vogely, A. J. (1998). Listening comprehension anxiety: Students' reported sources and solutions. *Foreign Language Annals*, 31(1), 67-80.
- Wang, S. (2010). An experimental study of Chinese English major students' listening anxiety of classroom learning activity at the university level. *Journal of Language Teaching and Research*, 1(5), 562-568.
- Wei, M. (2007). The interrelatedness of affective factors in EFL learning: An examination of motivational patterns in relation to anxiety in China. *TESL-EJ*, 11(1), 1-23.
- Williams, K. E. & Andrade, M R. (2008). Foreign language learning anxiety in Japanese EFL university classes: Causes, coping, and locus of control. *Electronic Journal of Foreign Language Teaching*, 5(2), 181-191.
- Wong, M. S. W. & Watkins, D. (2001). Self-esteem and ability grouping: A Hong Kong investigation of the big fish little pond effect. *Educational Psychology*, 21(1), 79-87.
- Woodrow, L. (2006). College English writing affect: Self-efficacy and anxiety. *System*, 39, 510-522.
- Wu, H. J. (2011). Anxiety and reading comprehension performance in English as a foreign language. *Asian EFL Journal*, 13(2), 273-307.
- Yan, J. X. & Horwitz, E. K. (2008). Learners' perceptions of how anxiety interacts with personal and instructional factors to influence their achievement in English: A qualitative analysis of EFL learners in China. *Language Learning*, 58(1), 151-183.
- Young, D. J. (1991). Creating a low-anxiety classroom environment: What does language anxiety research suggest? *The Modern Language Journal*, 75(4), 426-439.
- Young, D. J. (1999). Giving priority to the language learner first. In D. J. Young (Ed.), *Affect in foreign language and second language learning*. Boston: McGraw-Hill College.
- Yu, C. F. (1994). The assessment of ability grouping in the college lab program: The Soochow experience. *Soochow Journal of Foreign Languages and Literature*, 10, 45-77.
- Zhao, N. (2007). A study of high school students' English learning anxiety. *Asian EFL Journal*, 9(3), 22-34.

The Strategy Factor in Successful Language Learning.

By Carol Griffiths (2013). Multilingual Matters: Bristol, UK. pp. v + 220

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Adhering to the cognitive perspective that lays emphasis on the learners as active participants in the learning process (Anderson, 1980), this book foregrounds the significant role of learning strategies in the process of L2 acquisition focusing on a series of fundamental issues with respect to strategy use by L2 learners in relation to individual, situational and target variables. As such the volume can be seen as an effort to determine the pedagogical value of language learning strategies in a variety of L2 contexts and for a wide range of L2 learning tasks. Throughout its five chapters, the book seeks to resolve some of these controversies based on empirical evidence discussing pedagogical issues related to L2 learning strategy training as well as identifying areas still requiring further research clarification.

Chapter 1 offers an extensive analysis and re-interpretation of relevant literature on L2 learning strategies aiming to dissolve terminological issues related to the definition of *language learning strategy*, its effectiveness and the adoption of current L2 learning strategy taxonomies. Effectiveness of strategy use is discussed in terms of the situational and individual variables that potentially affect the skillful orchestration of strategies by L2 learners to achieve the desired learning outcome. Finally, an overview of the existing L2 learning strategy classificatory systems that merit extra research effort is provided so that strategy categorization is undertaken in theoretical and statistically justifiably ways to facilitate meaningful interpretation of research data.

Chapter 2 addresses key questions concerning strategy use, its relationship with other variables and with successful language learning based on quantitative data from a survey with

L2 learners in Auckland, New Zealand (Griffiths, 2003). More specifically: (i) the relationship between reported frequency of L2 learning strategy use, choice and successful language learning was statistically significant (ii) strategies related to interaction, function, vocabulary, writing, toleration of ambiguity, grammar, affect and reading were mostly related to successful language learning, (iii) motivation and nationality were found to significantly affect strategy use, (iv) learning in an ESL environment significantly influenced learners in their choice of strategies when learning L2 English favouring lexical flexibility, the ability to manage the learning process, tolerance ambiguity and development of vocabulary and reading skills.

Chapter 3 approaches the strategy issue from the individual student's point of view based on qualitative research evidence in the form of interviews to demonstrate patterns of individual variation of language learning and strategy use. Generally, the data obtained from these interviews support the findings presented in Chapter 2 since they indicate that advanced students report highly frequent use of a large number of language learning strategies. More specifically, they exhibit high individual variation in terms of L2 strategy use and choice that lead to differing rates of progress with motivation appearing to be the strongest influential factor.

Chapter 4 focuses on pedagogical research concerning the implementation of L2 learning strategy training programs in L2 instructional contexts and draws implications for classroom practice and teacher education. Previous strategy instruction programs (e.g. CALLA, Learning how to Learn, SBI) are briefly overviewed with an emphasis on the basic pedagogical principles employed in their design. Based on empirical findings of teachers' and students' beliefs on the potential of L2 learning strategies instruction in L2 classrooms, a detailed proposal for a strategy instruction program is finally offered to be considered for successful integration in L2 curricula pointing thus to pedagogical area for further research related to careful organization of future strategy instruction schemes.

Chapter 5 provides an overview of the book summarizing the most significant results of the study and highlighting the necessity for further research that would provide concrete evidence to ultimately reach more conclusive answers on the theoretical, empirical and pedagogical level concerning the influential role of L2 learning strategies in successful language learning.

Overall, this volume provides an excellent account of key issues concerning language learning strategies in L2 learning based on empirical data available from recent studies in the field. Its highly informative content is supported by useful bibliographic references promoting

a deeper understanding of the intricate notion of L2 learning strategy in relation to success in L2 learning in various educational contexts. Aiming at fostering the perspective of future coordinated research projects, the book includes all relevant material used in the study in appendices for use by researchers in the area. It is a valuable contribution to a rapidly expanding body of literature on the topic and will be of interest to teacher educators and practicing teachers alike for whom the pedagogical implications of the numerous findings are especially relevant.

References

- Anderson, J. (1980). *Cognitive psychology and its implications*. San Francisco, CA: W.H. Freeman.
- Griffiths, C. (2003) Language learning strategy use and proficiency: The relationship between patterns of reported language learning strategy (LLS) use by speakers of other languages (SOL) and proficiency with implications for the teaching/learning situation. PhD Thesis, University of Auckland.

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The Companion to Language Assessment.

Edited by Antony John Kunan (2013). New York: John Wiley & Sons, Inc. pp. 1-2240

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Language assessment has assumed new importance mainly because of the demands of the globalized world. It has a crucial role to play in education, language policy, immigration, economy, and identity formation and identification. The book addresses the concerns of a wide range of stakeholders including English language teachers, first language teachers, language test designers, language policy makers, language assessment scholars, and language testing students.

The companion comes in four volumes, with each volume containing four parts, with the exception of the fourth volume which has seven parts. While it is acknowledged that each volume deserves a separate review, care is exercised not to skip any of the main issues addressed in all volumes. The first volume, after an historical account of language assessment, details the assessment of various language abilities such as the four language skills, vocabulary, grammar, pragmatics, pronunciation, language contexts, literacy, and aptitude. It then moves on to assessing language ability in a diverse range of contexts including language testing in the military, in the court, in aviation, and in tertiary education. The first volume ends with a treatment of assessing the language of different groups of language learners such as that of young and heritage learners, teachers, teacher assistants, health professionals, and learners with communication disorders.

Four main themes constitute the second volume, namely, approaches to language assessment, assessment and learning, development of language tests, and the applications of technology in the measurement of language competencies. In the first part of this volume, large-scale language assessment, norm and criterion-related assessments, and task-based language assessments are explored. Issues related to alternative assessments like peer, self, dynamic, portfolio and performance assessments are discussed each in a separate,

self-contained chapter. The third part of this volume touches on the actual process of developing language assessments. The stages in the whole testing cycle including defining constructs, writing items and tasks, developing scoring criteria, designing counter-cheating strategies, and the administration of language assessments are done justice to in the penultimate part of this volume. This volume ends with a treatment of the contribution of novel technologies to language testing; eye-tracking, corpora, new media, and the automatic scoring of writing are examined in different chapters.

Test validation, the question of ethics in language assessment, and matters of test consequence and washback are the major concerns of the first part of the third volume. Next, the major psychometric methods used in language testing are presented; classical testing theory, Item response theory, Rasch measurement; and factor analysis and structural equation modeling are among the methods discussed in the chapters in this part. The qualitative approaches of relevance to language assessment including content and discourse analysis, introspective methods, and issues involved in rating performance appear in the next part. The third volume closes with an examination of the prominent interdisciplinary concerns of language assessment. The realist, antirealist, and the instrumental philosophies of test validation; the interfaces of language assessments and SLA, and the use of assessments in program evaluation are among the main notions elaborated on in different chapters.

Finally, the fourth volume takes a geographical approach to various language assessments around the globe. Beginning with the major controversies surrounding the assessment of English, the volume then gives a separate part to the assessment of other languages in each of the continents of the world. The current practices in the assessment of a wide range of languages in North and South America, Africa, Asia, and Australia are examined in the final part of the volume.

This collection has numerous salient features not all of which can be cited here. First, it is second in comprehensiveness to no hitherto published material in the field. It takes much imagination and creativity to think of a topic related to language testing that has not featured in the companion. It will definitely remain a key contribution to language testing for the coming decades. Another distinctive characteristic of the book is the generous space it has given to the assessment of other languages. This gives it universal appeal because there are many people around the world in different countries who take an interest in the assessment of languages other than English. For such language testers, there was no source to turn to for a thorough review of the field. This lacuna is now filled with this publication. Moreover, the fact that chapters in the collection have been authored by people with diverse backgrounds

from around the globe renders it representative of the collective thinking of the global community of language testers. Finally, the coverage given to the intersection of language assessment and philosophy, which was urgently needed in the field, is another strength of the publication.

As there is nothing perfect in the world, this publication despite its numerous admirable features has its own drawbacks. The criteria based on which chapters have been assigned to various parts seem, at times, to be fuzzy and ambiguous. For example, one wonders why issues related to teacher classroom assessments are discussed in the interdisciplinary discussions of language assessment. Finally, given the centrality of the notion of validity to all practices of language assessments, the theoretical underpinnings of validity theory appear to be underrepresented.

Despite the few minor shortcomings of the publication, it is a seminal work in the strict sense of the word. A copy of this companion is a must in the personal library of all those who have an interest in language assessment.

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