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Introduction

It is our great pleasure and honour to introduce Volume 4, issue 1 of IAFOR Journal of Education. This issue is a selection of papers submitted directly to our journal as well as studies presented during:

1. The Seventh Asian Conference on Education (ACE 2015), “Education, Power and Empowerment: Transcending Boundaries”, held in Art Center of Kobe, Kobe, Japan, in October 2015.
2. The European Conference on Education (ECE 2015)- Brighton (July 2015).

Our journal is proud to introduce scholars from all over the world. This edition focuses on the behavior and learning performance of students from countries such as Albania, China and Hong Kong, Japan, United Arab Emirates, as well as learners from North American and South Asian Indigenous Communities.

The first paper, co-authored by Eunice Tang, Edsoulla Chung, Eddy Li, and Steven Yeung is entitled “Online Independent Vocabulary Learning Experience of Hong Kong University Students.” Their paper presents an overview of the contents of an independent vocabulary learning platform designed to equip undergraduates in Hong Kong with proper knowledge and skills for vocabulary expansion. It also introduces the theoretical underpinnings of its design, and reports on the experience of its users after an eight-week self-learning period. Based on the findings, the researchers concluded that most learners placed emphasis on only certain aspects of word knowledge, considered the use of dictionary the most straightforward method to learn new words, and showed limited use of strategies for learning and remembering new words. Several implications, such as the importance of enhancing comprehensive vocabulary instructions at early years, the need to enhance autonomous vocabulary learning at tertiary level, and the use of technology to foster vocabulary learning are addressed.

The second paper, entitled “Analysis of Compositions Written by a Chinese Child in Japan” is co-authored by Lucy Spence and Yang Tao. The authors examined one multilingual child's writing over three years and used discourse analysis to uncover themes in the child's life and how she was developing as a writer. The child sustained an interest in helping others and contributing to the betterment of the world around her by taking action regarding her family's well-being and environmental responsibility. The authors argue for the use of discourse analysis in order to better understand the writing development of multilingual students.

The third paper, entitled “How to Practice Posthumanism in Environmental Learning: Experiences with North American and South Asian Indigenous Communities” is written by Ranjan Datta. Posthumanism is used as a theoretical frame with which Datta explores fieldwork conducted in Bangladesh with the Laitu Khyeng Indigenous Community and in Canada with the Dene First Nation Community. The Bangladesh field experience involved participatory research exploring sustainability goals. Findings demonstrated that indigenous people's knowledge is necessary and important to land management and indigenous people's well-being. The Canadian field experience involved a science ambassador program working with grade eight and nine students. Findings revealed differences in environmental science definitions between the ambassador program and Dene First Nation participants.

The fourth paper, entitled “Attitudes and Behavior of Ajman University of Science and Technology Students Towards the Environment” is written by Rasha Abdel Raman. Undergraduate students enrolled in environmental science classes were surveyed to determine their attitudes and behavior toward the environment and the course itself. Findings indicated differences in attitudes and behavior toward the environment according to the college in which the students were enrolled. The students had generally positive attitudes toward the class, while suggesting ways to make it more current and practical.

The fifth paper, entitled “Understanding Student Attitudes about Distance Education: The Importance of Excitement and Fear”, is co-authored by Esther Smidt, Jennifer Bunk, Rui Li, Ashley McAndrew, and Matthew Florence. The research question of this quantitative study was “Do feelings of excitement and fear moderate and/or mediate the relationship between online learning experience and student opinions about the current state of online education, namely that institutions were pushing too much instruction online?” Data consisted of a student survey and findings revealed that firstly, students with online experience who were fearful of this learning mode were the most likely to report that their institutions were pushing too much online learning, and secondly, regardless of online learning experience, students who were excited about this learning mode were less likely to think that their institutions were pushing too much online learning.

The sixth paper, entitled “Teacher’s Influence Scale from their Colleagues and Principals: Its Relation with School Performance in Public Schools of the Albanian Educational System” is written by Valbona Nathanaili. The author tries to estimate this relation based on a questionnaire. The conclusion is that in the case of public educational system of Albania, the influence by the colleagues, regarding school performance, is slightly higher than by the principals. In this system, there is no effort to evaluate the school performance based on the collective efforts of teacher and principals and there is no mechanism to initiate or support a healthy relation, in function of this dimension. The perception of teacher about the student’s achievements is formed, mostly, based on individual impression. A strong factor that continues to influence school achievements is the background of the school community. Schools with better results (or schools with higher performance) are located in the community, where parents have high expectations towards their children.

The seventh paper, entitled “Exemplary Chinese University Professors: Qualities and Impact on Students”, is co-authored by Eugene P. Kim and Mathias Olson. Social learning is based on exemplars, models of values and behaviors that influence our own attitudes and actions. Teachers are an identifiable source of social learning, with influences on students that are beyond pedagogical. This study identifies characteristics of favorite and least favorite teachers of university students in China. It evaluates the influence of these teachers on student learning and motivation.

The eighth paper, written by Yoshihiko Yamamoto, is entitled “Japanese University Athletes’ Dilemma: Study, Sport Performance, or Both”. This paper explores Japanese university athletes’ dilemma of managing both study and sport performance effectively. Some university athletes will become professionals and they could earn enough money to support their entire life after their graduation. However, there are also many university athletes who do not become professionals and who will choose other careers. The author of this study believes that a university is a place for students to have the opportunity to learn what they are interested in and to prepare for their future careers. This study adopts both quantitative and qualitative approaches to analyze the data. A total of 216 responses to questionnaires were collected. The results of the questionnaires found that university athletes in this study were faced with two

dilemmas. They were busy for their sport club activities and they felt pressure to seriously participate in their club activities. In order to support university athletes, this study discusses three suggestions, such as enough financial support for university athletes, promotion of peer learning to university athletes, and collaborative work between university lecturers and sport club team coaches.

Please note that we welcome original research papers in the field of education submitted by teachers, scholars, and education professionals. They may send their manuscript even though they did not participate in one of the conferences held by IAFOR.

We also welcome book reviews, reviews of the literature in the field, and contributions introducing key educational scholars. The next issue scheduled for August 15, 2016 will also be a selection of papers submitted during the above mentioned conferences. IAFOR publications are freely accessible on the [website](#) (Open Access).

Moreover, there is no publication fee for authors. Please find the guidelines at this end of this issue and follow our guide for authors before submitting your paper.

Best regards,

Bernard Montoneri and Lucy Spence



Online Independent Vocabulary Learning Experience of Hong Kong University Students

Eunice Tang, Edsoulla Chung, Eddy Li, and Steven Yeung

Abstract

In response to the limited vocabulary size of its undergraduates, an independent vocabulary learning platform, VLearn was designed and launched in a university in Hong Kong. As an e-learning environment that supports self-directed vocabulary learning of Chinese learners, the primary aim of VLearn is to equip users with appropriate knowledge and skills for vocabulary expansion. This paper introduces the contents of VLearn, and the theoretical underpinnings of its design. It also reports on the vocabulary learning experience of its users during an eight week evaluation study. Suggestions are made on how independent vocabulary building at higher education, as well as comprehensive vocabulary instruction at early years could be supported by means of technology.

Keywords: vocabulary teaching and learning; e-learning strategies; Chinese learners; self-directed learning; English language education

Introduction

A second language learner must possess an 8,000 to 9,000 word-family vocabulary in order to comprehend most written discourse in English and a vocabulary of 15,000 in order to read with minimal disturbance (Nation, 2001; 2006). However, a number of studies have shown that the vocabulary size of Hong Kong university students does not measure up to such a standard. Cobb and Horst (2000), for example, found that undergraduates in Hong Kong performed well at only between 3,000 and 5,000 frequency word levels. In a more recent study, Chui (2005) investigated the first-year entrants of a local university and concluded that the majority of students possess no more than a 3,000 word vocabulary. In other words, most Hong Kong undergraduates do not seem to have acquired the ‘threshold’ level of vocabulary to interact with English academic texts effectively at university where English is adopted as a medium of instruction.

Literature Review

Hong Kong students begin their compulsory English learning in the second/foreign language classroom in primary one. In the English Language Education Key Learning Area Curriculum Guide (P1-S3) (CDC, 2002), broad learning outcomes of the four language skills are stipulated clearly for each key stage. The role and function of vocabulary, however, is not specifically mentioned. As Zimmerman (1997) puts it, the teaching and learning of vocabulary has long been undervalued in the field of teaching English as a second language. Systematic learning and acquisition of English lexicon appears to be secondary to that of grammar and other linguistic skills (Coady, 1997). With the implementation of communicative language teaching in Hong Kong (Curriculum Development Council, 1999), which focuses largely on developing the communicative competence of learners, the teaching of vocabulary seems to be largely at the implicit and incidental end (DeCarrico, 2006). Learners’ attention is usually directed to using the language for communicative purposes, rather than to the structural learning of unknown words (Nation, 1990). When approaching a text, for instance, teachers may frequently suggest the importance of understanding the general sense of the discourse, rather than the meaning of individual lexical items (Hill, 2005).

Since the handover in 1997, the role of English language has been greatly reduced in Hong Kong. Meanwhile, the use of Chinese has been actively promoted in various social domains (Bolton, 2002). The degree of bilingualism in the community has further been weakened with the ‘mother tongue policy’ in 1997 (Poon, 1999), by which the majority of schools are mandated to use Chinese as the medium of instruction. Rose (1999) argued that English has gradually shifted from a second language to a foreign language in the post-colonial Hong Kong, and learners’ authentic exposure to it is rare. The growing dominance of Chinese language use in the social context supports the argument that Hong Kong appears to be a largely monolingual Chinese society, whereas English remains more a foreign than a second language for most of its citizens. While incidental vocabulary learning works well for native speakers, who are always immersed in their mother language, it may be less effective for second or foreign language learners due to their limited exposure (DeCarrico, 2006). Opportunities for learners to practice the target language, either in or outside the classroom, are very limited.

Despite such a restricted authentic exposure to the target language, the literature tends to suggest that incidental vocabulary learning could greatly be facilitated if learners are equipped with appropriate vocabulary learning strategies (DeCarrico, 2006). Examples of these include determination strategies, cognitive strategies, and metacognitive strategies (Schmitt, 1997). Nevertheless, as revealed by various studies, most Chinese students seem to possess a narrow

range of vocabulary learning strategies. Zhang (2009), for example, investigated the English vocabulary size of 481 students from six universities in Western China, and studied their vocabulary learning approach. Results indicate that the most common strategies used by the students were: using a dictionary, guessing meaning in contexts, and taking notes. In his study with 850 students from Beijing, Gu (1997) concludes that low proficient students tend to resort to visual repetition when they attempt to learn unfamiliar words, which is “the kind of strategy they might have used in primary school to memorize Chinese characters” (p.666). This suggests that weaker students would rely much on their first language learning strategy in learning a second/foreign language. As for learners of English in Hong Kong, using bilingual/monolingual dictionaries is considered as the most helpful discovery strategy of vocabulary learning, followed by guessing from textual context (Xu, 2010).

Chinese learners of English appear to have strong preferences for guessing and dictionary strategies vis-à-vis strategies like social strategies and metacognitive strategies (Marin, 2006; Gu, 2010). The reasons that govern such learning styles, however, are hitherto speculative. Xing and Jordan (2012) attribute such phenomena to the examination-oriented education system in the cultural context.

Alongside rigid language course design, learners are rarely provided with ample opportunities to learn the language through social interaction, nor do they consider it necessary to do so. Gu (2002), on the other hand, related these word study strategies to the way Chinese learners perceive educational achievement. From a cultural perspective, success in Chinese societies is greatly associated with diligence, while failure with lack of effort (Biggs, 1996, & Phillipson, 2007). Thus, it is not surprising to find that learners tend to devote their time to ways that could demonstrate their hard work (e.g. taking notes) amid the learning process.

In the Hong Kong primary and secondary classrooms, English teaching often follows a P-P-P model (i.e. Presentation, Practice and Production). When a new item is introduced, the teacher will first provide adequate input before students are assigned with opportunities to practice the taught item and use it on their own in some learning tasks (Tang, 2004). This is the case when direct vocabulary teaching is involved. As noted by Tang and Nesi (2003), English language teachers in Hong Kong did not plan to teach a lot of new words in a lesson. The teaching of a new word was often confined to the provision of input on pronunciation and/or meaning. Also, there was no occasion when students were asked to take part in output activities.

In view of the English vocabulary learning environment in Hong Kong and the learning characteristics of Chinese learners as mentioned above, boosting the vocabulary size of Hong Kong students at university level may require consideration of learning needs, learner characteristics, and self-disposition. First, these undergraduates have limited knowledge of word meanings as there are no guidelines for systematic second language vocabulary development in the curriculum and in the classroom. Second, given the low status of vocabulary teaching in second language education, it seems unlikely that explicit vocabulary learning alone would bring forth sustainable growth in the target vocabulary. Third, the majority of Chinese learners are found to be under-equipped with appropriate vocabulary learning strategies that foster incidental or independent vocabulary learning. Their restricted use of, among other things, social strategies and metacognitive regulation suggests that vocabulary learning occurs primarily in a controlled environment with instruction, rather than in an autonomous manner that drives self-learning. Self-initiated learning is not practised nor promoted in the second or foreign language classroom.

Regardless of their discipline, university undergraduates in Hong Kong have to take a few credit-bearing English courses in their junior years. However, these courses primarily focus on academic reading and writing and job-related communication. There is no particular English course which aims to expand students' vocabulary knowledge and size. Consequently, these university students have to take greater responsibility for their own learning if they want to learn more words. They are expected to take control and responsibility for their own learning by choosing appropriate materials to read and adopting different strategies to consolidate their learning. Over the past few decades, researchers have argued that autonomous learning should be promoted as it encourages the active involvement of learners and enables them to become more independent in what they think, learn and how they behave (Littlewood, 1996a). However, typical Chinese learners are perceived as dependent (Pierson, 1996) and passive (Tang & Nesi, 2003). It was also claimed that many students in Asia have very weak intention in learning independently outside class, which in turn limits their second language learning (Lee, 1998). Thus, by developing both procedural and personal autonomy (White, 2011), Chinese university students may be better motivated to take an active role in improving the quality of their own learning, to spend time on vocabulary learning, and to choose appropriate materials that suit their learning needs.

An Online Independent Vocabulary Learning Platform

Learner autonomy is regarded as a crucial characteristic of all sustained learning that attains long-term success (Littlewood, 1996b), and an e-learning platform is considered a virtual language coach that supports self-directed learning (Wielgolawski, 2011). In order to address the concern of vocabulary learning needs and the learning characteristics of Hong Kong university students, an independent vocabulary learning support platform VLearn was designed and launched in a university in Hong Kong. The aim was to (a) empower university students with the knowledge and skills to learn new words independently outside the classroom (b) strengthen their knowledge of words and strategies to learn and remember words; (c) engage them in online strategies-based instruction for independent learning. An evaluation project was developed to examine learners' experiences using VLearn. The project consisted of three stages. In Stage 1, participants were invited to a workshop on vocabulary learning in VLearn. Stage 2 was an eight week self-report study in which participants were provided with vocabulary learning logbooks to record their vocabulary learning experiences. The final stage was an evaluation study designed to collect feedback from participants on the content design and track their vocabulary learning profiles. The data collected helps understand the usefulness of VLearn, and how university students tackle new words in an independent vocabulary learning environment. The results of the evaluation study would help improve English vocabulary instruction at university in the future.

Content design. Better learning is likely to take place when learners are aware of how their learning is carried out (Nation, 2001). Thus, the different aspects of word knowledge and a wide range of vocabulary learning strategies with sequenced learning activities are included in VLearn. The learning materials are divided into four sections: word knowledge, word formation, meaning relations, and vocabulary learning. A taxonomy of vocabulary learning strategies from Gu and Johnson (1996), Oxford (1990) and Schmitt (1997) was adopted to devise relevant methods for students to discover meaning of new words and to remember them. Table 1 below outlines the contents of each section in VLearn, while Table 2 provides a simple taxonomy of vocabulary learning strategies in the Vocabulary Learning section.

Table 1. Organization of VLearn

Word Knowledge	<ul style="list-style-type: none"> • Word meaning • Aspects of word knowledge
Word Formation	<ul style="list-style-type: none"> • Internal structure of a word • Word formation processes
Meaning Relations	<ul style="list-style-type: none"> • Various types of semantic relationship
Vocabulary Learning	<ul style="list-style-type: none"> • Various vocabulary learning methods and vocabulary building strategies

Table 2. Taxonomy of vocabulary learning strategies introduced in VLearn

Strategies for the discovery of a new word's meaning	Strategies for consolidating a word once it has been encountered
Determination strategies (DET)	Social strategies (SOC)
Social strategies (SOC)	Memory strategies (MEM)
	Cognitive strategies (COG)
	Metacognitive strategies (MET)

Sequenced learning activities. To meet the expected teaching and learning styles inherent in the Hong Kong English classroom, the contents of each section are structured into three learning sequences: input, practice, and quiz.

Input. The input section focuses on the conceptualization of word knowledge, word formation process, meaning relations and descriptions of vocabulary learning strategies. To be more specific, learners are not only introduced to the different aspects of word knowledge, but also presented with word formation mechanisms and morphological knowledge which facilitates the decoding and understanding of lexical items they may encounter. In addition to the conceptualization of word knowledge, there are a number of tools and strategies to remember and consolidate words learned.

Practice. The practice section provides students with ample examples of applications of vocabulary learning strategies and self-assessed exercises for consolidation. With instant feedback provided, learners can check their mastery of concepts and are directed to revisit the content of the relevant webpages for better understanding.

Quiz. Quizzes are available in the end of the sections ‘Word Knowledge,’ ‘Word Formation’ and ‘Word Sense Relation.’ The quiz section is used for learners’ active retrieval of word knowledge and self-assessment. It offers students concrete opportunities to assume responsibility for their learning through assessing their learning progress.

Methods

Twenty undergraduates from different disciplines signed up for the workshop in Stage 1. In the workshop, participants attended a lecture about the contents of VLearn. Topics included word knowledge, word formation, meaning relations and vocabulary strategies. At the end of the workshop, participants were invited to join an eight week self-report study of their vocabulary learning journey. Fifteen of them volunteered to take part in Stage 2.

In the self-report study, participants were asked to go through the contents of VLearn in detail. Hyperlinks to reading materials such as online newspaper articles were provided on a weekly basis to support their reading. Strategies employed to learn different vocabulary items were subsequently documented in their logbooks (Figure 1) which were then collected at the end of the eighth week for quantitative and qualitative analysis.

Please record the new words learned and check the appropriate boxes to indicate strategies used in learning them.

Date	Source e.g. newspaper, coursebook, novel, film, song, etc	New words 1. pronunciation 2. spelling 3. connotation 4. parts of speech 5. meaning 6. synonym / antonym 7. collocation 8. other forms	Consult dictionary	Ask other people	Guess from context	Analyze its word parts (roots and affix)	Use a thesaurus	Connect word with already known words	Associate word with mother tongue	Find out L1 translation	Keep a vocabulary notebook	Compile a word list	Practise new word (verbal or written repetition)	Draw a semantic map	Create an image/picture of the word	Narrate a story with new words	Connect the word to its synonym, antonym, coordinates, etc.	Continue to revise/study over time	Other strategies (pls specify)
2/7/2013	BBC	monetary 1, 2, 4, 5, 6	✓		✓								✓						
2/7/2013	BBC	austerity 1, 2, 4, 5	✓		✓								✓						
2/7/2013	BBC	allude to 1, 2, 3, 4, 5, 7	✓		✓								✓			✓		✓	
2/7/2013	BBC	obviate 1, 2, 4, 5, 3	✓		✓								✓						
8/7/2013	BBC	renowned 1, 2, 7, 5, 4	✓		✓			✓					✓						

This template is available at <http://plate.fed.cuhk.edu.hk/vlearn/resources/logbook.doc>

Figure 1. A sample page of VLearn logbook

One week after the completion of the self-report study, participants were invited to fill out a questionnaire and attend individual interviews. The questionnaire was conducted to examine students' feedback and attitudes towards the usage of VLearn. The questionnaire, adopting a 7-point Likert scale ranging from 7 (strongly agree) to 1 (strongly disagree), consisted of 28 questions based on the design framework, usefulness and effectiveness of input, technical design and technical support. Individual interviews were subsequently conducted. Data from the questionnaire and logbook analysis were triangulated with the interviews to verify the validity and reliability of the data.

Findings

Survey on Perceived Usefulness and Effectiveness of the Contents

The overall design of having input, practice and quiz appeared to be well-received by the participants. They rated positively towards the usefulness and appropriate level of difficulty of the contents at each stage (see Table 3 for an overview). In particular, the input section was rated relatively highly. It is not surprising to find that participants favored input as the contents were probably new to them and might not have been covered in formal English classes at primary and secondary levels and at university if they were non-English majors. In the interview, some participants expressed they would like to have more examples and more frequent recommended resources.

Table 3. Perceived usefulness and level of difficulty of the contents

	Usefulness		Appropriate Level of Difficulty	
	Mean	SD	Mean	SD
Input	5.14	0.86	5.29	1.14
Exercises	4.71	0.73	5.21	1.19
Quizzes	4.71	0.99	5.21	1.19

Although the standard deviation indicated different perceptions of the level of difficulty of the content, it is encouraging that these participants, who are all non-English majors, did not find the contents difficult for them to learn on their own. The discrepancy within the group could possibly be explained by their disciplines of study and language backgrounds. In fact, around 40 per cent of the participants were science majors, whereas the other participants study within Arts, Business Administration, Engineering, and Social Science. Similarly, around 35 per cent of the participants received outstanding English results in the public examination before entering the university, while the rest of them only attained the minimum English requirement for university entry. Notwithstanding limited coverage in the local English curriculum and English courses at university, the input in different sections appeared to be favored by the participants in a self-access learning environment (see Table 4).

In the Vocabulary Learning Strategies section, the ‘Keyword method’, ‘Imagery’, ‘Stories’, and ‘Semantic map’ scored relatively lower than other strategies. As reported in the interviews, these methods were new to the participants. They were, somehow, considered as less straightforward. At the same time, they required a certain degree of creativity. As argued by Wong (2004), the Chinese education system demanded conformity and ‘might not be conducive to the development of creative thinking’ (p. 156). This could possibly explain why our participants appear not to favor the ‘creative’ methods of learning vocabulary, which they would consider difficult to master. Not surprisingly, the nature of the strategies and participants’ familiarity with the strategies are likely to be associated with the participants’ perceived usefulness of the input given.

Table 4. Perceived usefulness of the input sections

Input		Mean	SD
Word Knowledge		5.43	1.02
Word Formation Processes		5.50	1.09
Word Sense Relations		5.21	0.58
Vocabulary Learning Strategies	Vocabulary Collector	5.07	1.00
	Word List	5.36	0.93
	Keyword Method	4.62	0.77
	Imagery	3.92	1.26
	Stories	4.00	1.75
	Semantic Map	4.07	1.14

When participants showed a clear preference of different vocabulary learning methods, it is also predictable to find similar results for the effectiveness of using those methods in learning and remembering new words (Table 5). Participants also rated ‘Vocabulary Collector’ and ‘Word List’ strategies considerably higher, showing they would still rely on familiar strategies when they encountered new words. However, participants seemed to be quite receptive to other unfamiliar strategies as well. They were aware of the effectiveness of ‘Imagery’, ‘Stories’, and

‘Semantic Map’ in helping them remember new words, suggesting they understood the nature of these methods. They also made use of the sounds in their first/native language to learn and remember the pronunciation of new words.

Learning Journey: A Logbook Analysis

During the eight week self-learning period, fifteen participants encountered a total number of 626 new words. The sources of those new words mainly came from academic materials (e.g. IELTS word lists, GRE word lists, course materials), leisure reading materials (e.g. magazines, newspaper articles), and entertainment (e.g. television, songs, movies). Yet, it is noteworthy that the students did not seem to have developed English reading habits and needed to be provided with reading sources or materials to facilitate their learning.

Table 5. Perceived effectiveness in Vocabulary Learning Strategies in learning and remembering new words

	Learning new words		Remembering new words	
	Mean	SD	Mean	SD
Vocabulary Collector	5.00	1.24	5.07	1.14
Word List	5.29	0.99	5.21	1.37
Keyword Method	4.21	0.97	4.43	1.16
Imagery	3.71	1.38	4.14	1.61
Stories	3.31	1.49	3.57	1.45
Semantic Map	3.71	1.33	4.00	1.30

Aspects of word knowledge. Of all the 626 new words, participants showed a clear interest in knowing the meaning, pronunciation, spelling, and parts of speech (Figure 2). Of these aspects, word meaning received by far the most attention. With the belief that understanding the meaning of a new word is crucial, some participants expressed they consistently looked for meanings when they encountered unfamiliar vocabulary items. The result is not surprising, for learning vocabulary is often perceived as learning meanings (Brown, 2010). Mastering the pronunciation of a word also appears to be an important part of the participants’ vocabulary learning process. According to these second/foreign language learners, they habitually made an effort to check the pronunciation of unfamiliar lexical items. It is noteworthy that technology has promoted the practice. One participant related this habit to the availability of the mobile application in his smartphone, which allowed him to check the pronunciation more readily. The results on aspects of word knowledge are consistent with the direct vocabulary teaching observed in Hong Kong schools where teaching meaning and pronunciation were the principal treatments of new words (Tang & Nesi, 2003).

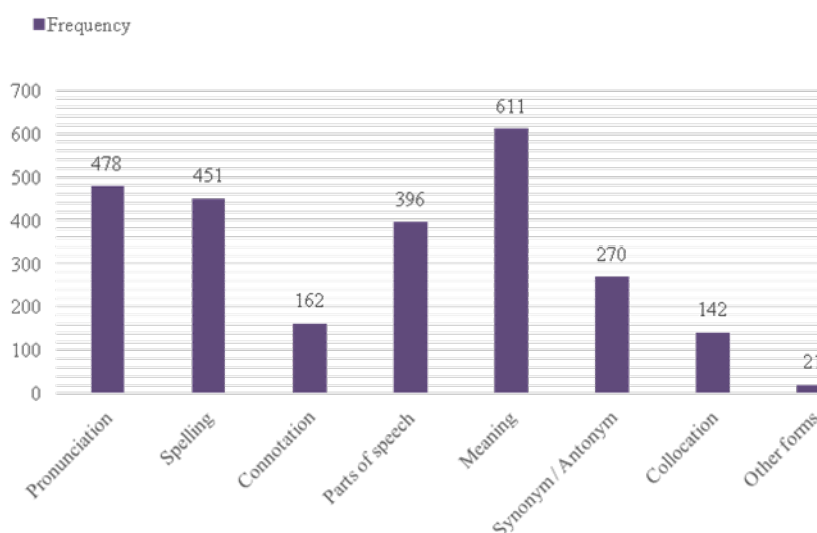


Figure 1: Aspects of word knowledge

Noticeably, the learning of connotation, collocation, synonyms or antonyms, and other forms of a word were not the major concerns of the participants. Whilst a participant suggested that he only put effort into learning a word by identifying its connotation and collocation when he found the lexical item particularly sophisticated, other participants commented that their English teachers seldom encouraged them to focus on these two aspects during their lessons. As a result, they did not even understand what these concepts mean. Also remarkable to note, whether or not a word has ‘other forms’ received the least attention of all eight aspects of word knowledge. One probable explanation may be that the participants were very much goal-oriented. They were satisfied with their learning after comprehending the meaning or knowing the sound of the word and therefore did not explore its word family.

Vocabulary Learning Strategies. An examination of the learning logs reveals an unbalanced use of vocabulary learning strategies by the participants. They tended to use strategies which are useful and effective in learning new words rather than remembering or consolidating the learning of new words. Table 6 below shows how frequently vocabulary learning strategies were used by the participants. Determination strategies, particularly ‘consulting dictionaries’ and ‘guessing from context’ methods, played a pivotal role in the vocabulary learning process. Social strategies, however, were rarely adopted by participants, implying that they might find learning a more personal or individual process.

Table 6. Vocabulary learning strategies adopted by the participants (Total number of new words = 626)

Vocabulary Learning Strategies Adopted (in order of frequency)	Taxonomy	%
Consult dictionary	DET	96
Guess from context	DET	38
Practice new word	COG	23
Continue to revise	MET	20
Keep a vocabulary notebook	COG	18
Use a thesaurus	MEM	15
Connect words with already known words	MEM	14
Analyze its word parts	DET	8
Connect the word to its synonym, etc.	MEM	7
Find out L1 translation	DET	6
Narrate a story with new words	MEM	4
Ask other people	SOC	3
Associate word with mother tongue	MEM	3
Compile a word list	DET/COG	3
Create an image / picture	MEM	2
Draw a semantic map	MEM	1
Other strategies	/	0

It may be worth noting that consulting a dictionary was by far the most valued determination strategy in the self-report study. Apparently, the participants relied heavily on dictionaries in vocabulary learning because dictionaries can provide word knowledge (meaning, pronunciation, spelling, and parts of speech) they were most eager to learn about a new word. Most participants also suggested that consulting dictionaries was the most ‘straightforward’ and ‘effective’ method to gain vocabulary knowledge. Indeed, technology also reinforced their choice as the online dictionaries and mobile applications on dictionaries have greatly enhanced the readiness and availability of the resource.

Guessing from context was another popular determination strategy adopted. One participant explained that she usually tried to guess the meaning of an unknown word from the context due to her belief that such practice “might facilitate deep processing.” Yet, she considered confirming her guesses via consulting dictionaries to be necessary since she was worried she might misinterpret the meaning of a word without doing so.

Certain strategies were rarely used by the participants. In particular, social strategies were rarely adopted. Out of the 626 words learned, only 16 words (3%) had been learned through asking other people. While a participant admitted that she would ask her friend, who was an English major, only if she studied in the library with her, other participants indicated that they ‘did not see the need of doing so.’ From their perspective, asking other people for help was ‘unnecessary’ because they could always check the meaning of a word using online dictionaries with ease.

Indeed, various types of memory strategies, including forming an image, narrating a story with new words, creating an image/picture and drawing a semantic map, were scarcely adopted. To

most participants, these methods of learning vocabulary were “too creative” and “time-consuming.” Not seeing “the purpose of using the methods” and being “uncertain about how the methods worked.” they were more willing to spend time memorizing new words as they perceived it a “more direct method” to learn vocabulary. These comments suggested that participants were not familiar with these methods or they did not even know these memory strategies for new words.

Discussion

Aspects of Word Knowledge

In most Asian countries, explicit or direct teaching of vocabulary is common in English as a Second Language (ESL) and English as a Foreign Language (EFL) classroom. However, the great majority of the planned and unplanned new words to be taught in Chinese ESL/EFL classrooms is only treated with unmodified or premodified input, indicating that teachers mostly focus on sound and meaning of the new words, and the presentation was short and direct (Tang and Nesi, 2003). According to Brown (2010), form and meaning often receive the most attention in general English textbooks at different levels, while the other aspects of word knowledge receive negligible or even no attention. Vocabulary teaching and learning in the Asian ESL/EFL context attends mainly to the ‘partial-precise dimension’ of receptive word knowledge. They fail to address the ‘depth dimension’ in developing vocabulary knowledge (Zhang, 2012, p.33).

Although participants in this study favored the word knowledge content in the input section, in the actual learning process, it is obvious that they still put great emphasis on meaning, form and pronunciation with little attention given to collocations, connotations and other forms because most aspects of word knowledge are neglected in earlier years of English vocabulary instruction.

Use of Dictionaries

Consistently, a dictionary is perceived by both teachers and students as the most straightforward method to understand and learn new words. However, most traditional analogue dictionaries can only provide limited knowledge of a word. A comprehensive coverage of all aspects of word knowledge in a single dictionary is always impossible because of pragmatic concerns, e.g. price, page limit and weight. Online dictionaries or mobile applications on dictionaries, on the other hand, are considered as “convenient,” “handy” and “accessible” vocabulary learning tools for most participants in this study. Most digitised dictionaries will include popular aspects of word knowledge, e.g. sound, spelling, grammar, and synonyms, which are also found in traditional dictionaries. Some well-developed digitized dictionaries include word origins, word lists and forum to stimulate interest, suggest learning needs, and promote collaborative learning. With easy accessibility to technology and detailed information, online dictionaries or mobile applications on dictionaries are more preferred resources to enhance the depth dimension in vocabulary knowledge development among second language learners. Although most analogue and digitized dictionaries provide examples to illustrate the use and usage of the target word, abundant exposure and authentic language use in different contexts and genres and in spoken and written modes enables learners to hypothesize and understand form, meaning, and use of the word (Nation, 2001). The language corpus available as internet resources (e.g., Michigan Corpus of Academic Spoken English, British National Corpus) allows learners to see how the word is used appropriately and correctly in authentic texts so as to strengthen their exposure to aspects of word knowledge.

Vocabulary Instruction

In this study, participants claimed that most input in VLearn were unfamiliar to them. The failure to provide relevant and adequate input about the meaning of a word and different vocabulary learning strategies in instruction and textbooks has led to participants overlooking the ‘what’ and ‘how’ of learning a word. The instruction on new words in local textbooks primarily attends to receptive knowledge with explanation of meaning and form. In classroom practice, teachers will teach the sound as well. As noted by Waring (2002), teachers often leave vocabulary learning to students themselves and rarely introduce different vocabulary learning strategies for vocabulary development. Strategies which require creative use of language were not practised in the classroom. Imagery, narrating a story with new words, and drawing a semantic map are not favored by English teachers because these methods require more class time than can be afforded. Participants’ past learning experience indeed had a strong influence on their choice of vocabulary learning strategies during the learning process. As noted, vocabulary treatment in textbooks and instructional practices are not conducive to strategy development. Participants in this study showed an imbalance in the use of strategies for learning and remembering new words. They adopted memory, cognitive, and metacognitive strategies sparingly. Thus, it is not surprising that most students learn and forget new words easily. Consequently, this limits their vocabulary growth throughout their years of English study.

Vocabulary instruction in the early years seems to initiate impoverished word knowledge and word processing problems. As such, English curriculum developers, textbook writers and English teachers should take greater responsibility for ensuring an extensive and systematic coverage of the various aspects of word knowledge and the different vocabulary learning strategies at different stages of schooling. It is important that systematic introduction of aspects of word knowledge should start in early years of English education and the practice of a variety of vocabulary learning and building strategies should also be strengthened through instruction.

Online Independent Learning for Asian Students

To promote independent second language learning, it is crucial to help learners develop a positive learning attitude, set specific learning goals, and develop a process for language knowledge and use. However, effective independent online platforms must not ignore the contextual and cultural background of the target users. Studies have shown that Asian students prefer teacher guidance (Gan, 2009) and they often see teachers as an authority in their learning process (Littlewood, 2000). Second language learners at all ages, levels and learning modes need guidance and support during the language learning process. Rich content on word knowledge and a variety of vocabulary learning strategies were viewed by the participants as helpful in setting vocabulary learning goals and raising their awareness of the process of acquiring vocabulary knowledge. The design of VLearn addresses the learning culture of these Chinese second language learners who expect a familiar structured and sequenced learning path to guide them in the process of learning.

Future Development

To date, numerous online resources and websites on vocabulary learning are available online. Yet, to maintain interest and motivation to access the site for continuous self-improvement and self-learning, elements for sustainment are required. At present, most vocabulary learning platforms are static pages with regular reviewing and updating. To improve the sustainability of an online platform for independent learning, learners need to be ‘activated’ and ‘involved’. They need to develop a sense of ownership of the platform and be a member of the bigger

vocabulary learning community. With the popularity of social interaction in the virtual environment, VLearn can be transformed to create an interactive and dialogic setting for collaborative learning with the Web 2.0 concept. The shared learning experience will then be more conducive and supportive to provide a vigorous learning environment where students have full autonomy to be in charge of their own vocabulary learning. VLearn can also be enhanced by integrating more interactive components such as discussion boards, which can allow an exchange of ideas among users. As such, new information and knowledge can be generated in order for VLearn to serve as a self-managed platform and a growing learning community.

Conclusion

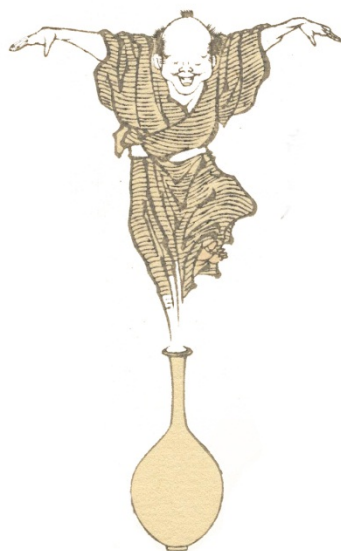
VLearn seemed to be a fruitful experience among this particular cohort of university students. Participants claimed to have learned more about how to learn new words. However, the evaluation study also showed that learners' word knowledge and strategy use were to a great extent affected by what they were taught at school. These results can be used to make informed curriculum and pedagogical decisions to support comprehensive vocabulary instruction in the early years and promote independent vocabulary building in higher education. The study also sheds light on the great potential of making use of existing technology to develop the depth dimension of word knowledge, exchange learning experiences, reflect on one's own learning and refine vocabulary learning goals independently in this digital native era. Asian classrooms share a lot of similarities – learning culture, teaching style, examination system, as well as learning difficulties. In learning a second or foreign language, most Asian students find vocabulary particularly problematic. The difficulties of learning vocabulary cannot be ignored, both in the early years or at a tertiary level. Different aspects of word knowledge and a variety of vocabulary learning strategies should be systematically introduced and practiced throughout the instructed second/foreign language learning process and in a self-directed learning experience.

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Analysis of Compositions Written by a Chinese Child in Japan

Lucy Spence and Yang Tao

Abstract

This discourse analysis focuses on the Chinese and Japanese writing of a young student living in Japan who is ethnically Chinese and multilingual. A method for analyzing linguistically diverse student writing was used to explore the literary elements and heteroglossic voices in this student's writing. Such analysis has been shown to be beneficial to teachers for understanding linguistically diverse student writers. The findings were triangulated with observational data from the student's home and school, an interview with the student's teacher and interviews with the mother, who is the co-author of this study. The analysis revealed evidence of writing strengths in two languages, including flexible bilingualism and agency. Implications for school curriculum that develops student languages as a resource for learning are explored.

Keywords: multilingual; writing; children; discourse analysis; translanguaging; flexible bilingualism; agency

Introduction

Multiple languages are prevalent in our increasingly connected world, and this interconnectivity brings languages together in contact zones (Pratt, 1991) where speakers of multiple languages interact with one another. Schools are a common contact zone, yet while most educators are comfortable with the dominant language of instruction, they need tools for understanding multilingualism (Piccardo, 2013). Discourse analysis can shed light on how children develop multilingual competency, providing much needed information to educators, especially at the elementary school level.

Literature Review

Discourse Analysis of Student Writing

Discourse analysis in literacy research most often involves analyzing transcripts of oral discourse in order to understand how the literacy education of all students can be accomplished (Rex, et al., 2010). The present study however, analyzes multilingual student-generated writing. A socially situated perspective on student writing undergirds this study (Mercer, 2004; Lemke, 1995; Street, 1995). In this view, writing is understood as constructed within a cultural context, embedded in activity (Lave & Wenger, 1990). It is productive to analyze student writing from a socially situated perspective because students draw upon authentic experiences as they construct the written text. Discourse analysis can be used to reveal aspects of student experiences that informed their writing. Studies that use discourse analysis with multilingual writing are few, however we review several such studies in this emerging area of scholarship. The following studies reveal how multilingual students draw upon their linguistic resources as they write for a variety of purposes.

Harman and Varga-Dobai (2012) used a critical socio-cultural approach to discourse analysis to explore writing within an arts-based participatory education experience of middle school (ages 10-13) multilingual students in the United States. The students chose to write about issues of discrimination in their community and created a newsletter to publicize these issues. The young people exercised agency by using all their linguistic resources, choosing their topic, and disseminating information to others. The study illustrated how discourse analysis of children's writing can reveal issues that are important to students as well as actions students take to create better conditions in their lives and the lives of others. Discourse analysis can also be used to understand how writing styles interact among cultures. Curdt-Christiansen (2006) analyzed the writing of a nine year old Chinese heritage language learner in Canada. The analysis revealed direct quotes, which the student used in a culturally appropriate manner. Although the practice of quoting famous writers and poets in Chinese writing can be seen as reliance on authoritative discourse, Curdt-Christianson discussed how authoritative discourse co-existed with internally persuasive discourse. This process combines the literacy practices of multiple cultures to create written works that express the writer's identity. This process is highlighted in translanguaging theory (García & Wei, 2014), which encourages students to draw upon multiple language practices in their writing. This theory posits that multiple languages are part of an integrated system, and speakers move between languages as needed during a speech event as well as in writing. Canagarajah (2011) described how one college student strategically used her home language to compose an English essay that included Arabic words and phrases. The student foregrounded communication above correctness while writing an essay that deviated from the expected form.

Students not only use multiple languages, but also rely on multiple media in crafting texts. Lam (2000) described a Japanese high school English learner who designed a webpage melding extracts from magazines, music, celebrities, and other websites. The webpage allowed the student to connect with an international audience as he adjusted to life in a new culture. The present study builds upon these previous studies by using a discourse analysis method uniquely suited to discovering the resources students draw upon in their writing including languages, the words of others, media, and concerns that lead to agency. This study situates the multilingual student within a social world in which multilingualism is an asset.

Multilingualism is an Asset for Learning

It is important for educators to understand why multilingualism is an asset. “Bilinguals have an expanded repertoire with which to amplify communication and express comprehension. These resources have the potential to be both communicative tools and pedagogical tools” (Hopewell, 2013, p. 235). This stance is in opposition to educators who believe that multiple languages interfere with one another or that children should use only one language in order to increase the speed of language acquisition (Schwartz & Soifer, 2012). In the US, the state of Arizona mandated English-only instruction for English learners. However, Jiménez-Castellanos, Blanchard, Atwill and Jiménez-Silva (2014) found that when children studied in the English-only model, less than half met age or grade level performance. Ignoring students’ multiple languages does not benefit their learning.

The advantages of learning and using multiple languages are many. Some multilingual students use their languages to help their families understand school, medical, and other official documents and to negotiate parent-teacher conferences. Although such language brokering has its problems, some families rely on it for everyday life (Corona, et al., 2011). Another advantage for multilingual students is in learning world languages for academic purposes (Hernández-León & Lakhani, 2013) and students’ multiple languages may also eventually provide employment opportunities (Kondo, 1999). Additionally, multilingualism is an asset for cognitive development. Neuroscientists have discovered cognitive benefits to bilingualism such as enhanced performance of the attentional system (Costa, Hernández & Sebastián-Gallés, 2008). Multilingualism can be an asset to learning. Canagarajah (2011) illustrated how using a dialogic approach to instruction develops students’ linguistic resources in order to create texts in which two languages are complimentary. While writing, students draw upon their languages to make rhetorical choices. Indeed, even people who view themselves as monolingual use other languages in writing. For example, English authors often use French, German, Spanish, and Latin to illustrate their meaning.

There are benefits to writing in multiple languages, just as there are benefits to speaking multiple languages (Creese & Blackledge, 2010; Riley, 2015). For example, early oral language abilities are a resource that can lead to accomplished readers and writers when sufficient educational contexts are employed. Taylor, Bernhard, Garg and Cummins (2008) depicted such a learning context in a Canadian kindergarten where children wrote dual language books in collaboration with the classroom teacher and multiple generations of family members in the child’s home. Educators are increasingly utilizing students’ multiple languages for writing instruction (Fu, 2009), therefore, it is necessary to analyze such writing to understand the rhetorical strategies used. Building on previous work using discourse analysis with multilingual writing, our paper traces the linguistic moves made by a multilingual child when writing in two languages, Japanese and Chinese. Writing samples from her third, fourth, and fifth grade school years were chosen for analysis in order to explore how she was developing as a multilingual writer. Theories of translanguaging and multilingualism

contributed to our exploration of the following question: What can be learned through analyzing a bilingual Chinese/Japanese student's writing in both languages?

Method

A Discourse Analysis Method for Student Writing

Spence (2014) developed a method for analyzing linguistically diverse student writing called *Generous Reading*. In a study of 61 fifth grade students and their teachers (Spence, Fan, Speece, and Bushaala, forthcoming) it was found that when teachers used this method in a professional development setting, the teachers made more nuanced observations than a control group of teachers. The Generous Reading teachers drew from broader sources of knowledge about student writing. They noticed how their students used description, explanation, concepts, and expression contrasted with the control group, which took very little or no notice of these and continued to utilize a skills discourse of writing instruction.

Generous Reading draws from composition scholars and childhood educators who have analyzed student writing for contributing voices, or influences (Bakhtin, 1986; Dyson, 2003; Freedman & Ball, 2004; Halasek, 1999; Ryan & Barton, 2014; Welch, 1993) and for literary or descriptive language (Armstrong, 2006; Coady and Escamilla, 2005). Bakhtin referred to language as a heteroglossia, or diversity of voices. Analysis of voices “explicitly bridges the linguistic and the sociohistorical, enriching analysis of human interaction” (Bailey, 200, p. 269). Such an analysis helps uncover the historical and social influences in writing. Heteroglossic voices and literary language are internalized ways of using language, not authorial embellishments to writing. “The generalizations governing poetic metaphorical expressions are not in language, but in thought” (Lakoff, 1992, p. 203). Literary elements such as figures of speech used in everyday language can be analyzed to reveal the thought process behind that language.

Discourse analysis focusing on voices and literary language provided a framework for analyzing the writing of one child, Lala. First, we read one written work to get an overall understanding. Then we read it again, sentence by sentence, looking for voices of others in the writing. These voices could be from Chinese or Japanese literary tradition, phrases the family used at home, videos, or school events, for example. Next, we read the piece a third time looking for literary language for example, metaphors, symbols, repetition, alliteration and rhyme. Finally, we discussed what this analysis revealed about the child as a person and as a writer. We analyzed each of three pieces of one child's writing in this way, taking notes on the Generous Reading form (Table 1).

Data Collection

In the present study, the researchers collected all Lala's writing over a three year time span when she was 9, 10, and 11 years old. We chose a representative written work from each of these years. In addition to visiting Lala's school and interviewing one of her teachers, Spence engaged in four research visits to Lala's home. Observational notes were recorded at Lala's school and her home. Second author, Yang Tao is Lala's mother, a college-level teacher of English language who provided insights into Lala's early childhood and family life through several interviews. Yang Tao analyzed Lala's Japanese and Chinese writings and translated them into English.

Table 1. Generous Reading Form

Generous Reading

Student	Date	Grade	Teacher
Genre	Title		
Voices of Others		Literary Elements	
What does this tell you about the person?			
What does this tell you about the writer?			
What does this reveal about the writing?			
What is the student doing especially well that I want to reinforce?			
What can I teach that will help the student grow as a person or as a writer?			
What can I teach that will help improve this piece or future writing?			

Context

We report on the multilingual writing of an ethnically Chinese elementary student who was born and raised in Japan. Chinese are a significant population group in Japan. As of 2015, the ethnic breakdown of population was Japanese 98.5%, Koreans 0.5%, Chinese 0.4%, other 0.6% (Central Intelligence Agency, 2015). The researchers and child participant, Lala (pseudonym), became acquainted through a previous study of Japanese writing instruction when Lala was a student at one of the schools where the researchers observed her fourth grade teacher (Spence & Kite, 2013).

Lala's Early Years

Lala's father and mother are both Chinese and moved to Japan soon after they were married. Lala was born in Japan and began attending Japanese nursery school at nine months. She was immersed in the Japanese language while at nursery school. At home, her mother spoke to her in Mandarin Chinese, English, and Japanese, depending on the situation. Her father spoke to her only in Mandarin Chinese. Thus, Lala was multilingual from infancy. She continued to attend Japanese nursery school until the age of three, when she spent most of her third year in China with her grandmother. There, she attended a Chinese preschool. She came back to Japan at four years old, and continued to attend Japanese schools until the present time. Lala's family lived in the center of a large city in Japan within a predominantly Japanese neighborhood. In general, the family did not interact with a Chinese community, so Lala had little Chinese language input from the local environment. Beginning when Lala was five, her mother taught her about three hundred Chinese written characters using the Chinese national textbook. She continued teaching Chinese characters until Lala was in third grade, when she stopped. She thought Lala might be confusing Japanese *kanji* with Chinese writing, as the two are sometimes subtly different.

Analysis

We used the Generous Reading method to analyze three written works that were chosen as exemplars of Lala's multilingual writing (see appendix for the original language versions). The Japanese works were chosen as typical writings from third and fifth grade. The Chinese piece was one of only two Chinese writings that Lala completed during third, fourth, and fifth grade. Lala's only encouragement to write in Chinese during these years were through the open exploration notebook and the Chinese speech contest.

Yang Tao was familiar with the Generous Reading method. Thinking about the voices and literary elements in the writing, she read through each written work, while verbally translating into English for Spence. Together we discussed the heteroglossic voices within the written work, followed by a discussion of the literary elements. Finally, we discussed what this analysis revealed about Lala as a person, and as a writer. As this occurred, Lala played with her brother nearby, therefore, we could ask Lala to clarify aspects of the written work throughout the analysis and discussion.

Although we found many voices and literary elements in each piece of writing, we focus on those which suggest a pattern in how Lala was developing as a person and as a writer. For each piece of writing, we present contextual information and an English translation of each piece of writing, followed by our findings from the discourse analysis. The names of places and people are pseudonyms.

Findings

Japanese *Nikki* Entry

The first Japanese text we analyzed was written when Lala was in third grade. Her teacher asked the class to write on Monday about something they did on the weekend. The students wrote in a *nikki* (journal) and the teacher subsequently read the entries and commented in red pen, focusing on the content of the writing. *Nikki* is a common type of writing practiced in Japanese elementary schools. Lala's teacher required writing in the *nikki* every week. She also assigned writing during language arts lessons and across school subjects. The teacher provided the students with a notebook to explore topics of their own choice at home. Lala used this notebook extensively during her third grade year, and even used the notebook to engage in a self-study of Chinese. One Japanese *nikki* entry was analyzed for this study.

Takihotobashiru Park

Yesterday, because of good weather, we went to *Takihotobashiru*. We always go there by car but yesterday I asked my father, "Let's go there by bicycle."

And then my father said, "Okay." And I felt happy. We rode bicycles to the park.

I felt like only a few minutes later, my brother said, "Hey, look, *Takihotobashiru* is over there. Look, look." he said.

Really, it's true. We realized we arrived already. So we went to Children's Square. We tried our best to play. First of all, I played on the monkey bars. My brother worked very hard on it at that time and I said, "You can do it."

But my brother fell down from the monkey bars repeatedly, with one more to go. Only one more! So he cried very loudly. At that time I went to his side and said, "Are you okay? I'm sure you can do it!" I comforted him.

So with my words, my brother stopped crying. He said, "Okay, I'll try to pass the bars again, so please, my sister, watch me. Focus on me only, please." he requested.

So once again he started from the very beginning and went to the very end. He finished it, he did it! "Great," I said, "you worked so hard, congratulations."

My brother smiled. "Thank you" he said. That was fun for me, so I would like to go there again.

The heteroglossic voices and the literary language found in this piece of writing illustrate how Lala explored the power of words. The heteroglossic voices were cultural maxims, direct quotes of the father and brother, and dialogue typical of children's talk to each other. The literary elements were repetition, comparisons and theme development. These aspects of Lala's narrative initiated and sustained a theme: the power of words. For example, the dialogue between Lala and her father began with "We always go there by car but yesterday I asked my father, 'Let's go there by bicycle.'" Her father agreed, the first instance of Lala using the power of words to influence others.

Lala also used common Japanese maxims such as *ganbare*, "you can do it!" that indicate the belief that encouragement is important and can lead to success. This idea was reinforced by Lala's use of the phrase *ishokenme*, "do as well as you can." The idea that one can succeed

through trying hard was reinforced in the narrative through repetition, “I’ll try to pass the bars again” and “So once again he started” The dialogue between brother and sister continued the theme of the power of words as Lala’s words of encouragement had the effect of her brother successfully completing the monkey bars. Lala directly addressed the theme by writing, “So with my words, my brother stopped crying.” Lala expressed the power of words to comfort, motivate, and create a successful outcome.

Lala also expressed agency by helping her brother to achieve a goal. This agency was directed toward the betterment of the family unit. This narrative revealed Lala as an agent in encouraging physical activity for her family. First, she encouraged her father to allow the family to bicycle to the park, rather than take the car. Second, she encouraged her brother to achieve an athletic goal of completing the monkey bars. Lala’s actions resulted in increased physical activity for the whole family.

Chinese Speech

The next written work we present is the Chinese speech, written in fourth grade for a speech contest. The contest officials provided the topic, which was to write about a future goal or dream. The Chinese speech contest was held in a nearby city with a substantial Chinese population. Lala wrote the speech mainly in Chinese, using Japanese when she did not know how to express an idea in Chinese. Once she had written a draft of the speech, she asked her mother for suggestions of how to express the Japanese words and phrases in Chinese. She used her mother’s suggestions to rewrite the speech completely in Chinese. Then she continued to revise the speech until she had a final copy to be used in the speech contest.

What is Your Dream?

I want to be a person who is helpful to people who need help and to protect the earth. Even though I am still in elementary school, I can do two things. The first one, I can deposit my pocket money so I can do something. Every day I help my mom do some housework, washing dishes, cleaning house, watching my brother. My mom gives me 400 *yen* a month and I deposit this money and I never spend it at all. In Szechuan province there was an earthquake and also in Japan. My family and I donated money a little bit. One day a TV program introduced a place in Thailand where there was a flood. Every day it flooded and the school floated away. Money was donated for a floating school and the teachers taught in the floating school. That inspired me.

The second one, it is very important to separate trash in Japan. It is important to protect the environment. Separating garbage is a very good idea to protect the environment. It can decrease the pollution in the air and save the environment. Unfortunately Chinese people do not do very well on this point. I would like to tell my friends, my relatives, my family members about pollution and teach them how to separate garbage. In my opinion separating garbage is a good idea. What’s more I think carbon dioxide will pollute the environment very much, so I always persuade my father not to drive. If we can take a bus or take a train, I don’t want my father to take a car.

What’s more I decided not to eat potato chips. Potato chips are really delicious, but it needs a lot of palm oil. In order to make potato chips, a lot of forests are cut down to instead grow palms for oil. The earth’s environment has been destroyed and a lot of animals have lost their homes. This I remember from a good book. So I decided not to eat potato chips but it is something I can do to protect the environment. So my

conclusion is, my dream is to be a person who is helpful to other people in the society and I want to realize my dream bit by bit.

The heteroglossic voices and the literary language found in this piece of writing illustrate how Lala explored helping others in society. The heteroglossic voices in this speech were: television broadcasts of the Szechuan and Fukushima earthquakes and Thailand flood, people who came from Fukushima to the school, environmental slogans in Japanese lessons, books, pamphlets, and posters from the train station. The literary language was reminiscent of proverbs.

The speech had an obvious theme due to the nature of the writing prompt for a future goal or dream. Lala's dream was to help others in society. Lala developed this theme through texts she encountered, including television, posters, books, and pamphlets. Although the family does not usually watch television, the media had a strong influence on the speech. The natural disasters and resulting nuclear power plant accident at Fukushima had a devastating effect across Japan. Everyone was affected in some way. News broadcasts were shown at Lala's elementary school and in the aftermath of the disaster, people from Fukushima came to the school to speak. That same year, Thailand was devastated by their worst flooding in five decades and as a result many people were left homeless and many buildings were destroyed.

Lala directly referred to television broadcasts in her speech, "One day a TV program introduced a place in Thailand where there was a flood." Lala also directly referred to a book about habitat destruction in the rainforest, "The earth's environment has been destroyed and a lot of animals have lost their homes. This I remember from a good book." Lala's writing was also influenced by community pamphlets with detailed instructions on how to separate household trash for recycling; "Separating garbage is a very good idea to protect the environment." These influential voices in Lala's world reflected her growing awareness of her place in the world and society.

Lala felt that she could make a small difference in the world, but that small gestures by many people can have a large impact. The phrase, "bit by bit" is reminiscent of proverbs from China and other cultures that mean something like, "A single drop of water helps to swell the ocean." Lala's speech is a series of small actions that when combined with the actions of other people around the world, can have a larger impact.

The speech shares a message from the previously analyzed narrative. In both, Lala told her father not to drive the car. In the speech, she directly states that driving causes carbon dioxide emissions, which pollute the air. By analyzing Lala's writing across time, a clear picture of her interests and concerns begins to emerge. In the speech, she told her family in China that they should recycle their trash. This shows that Lala continued to take action for the betterment of the planet. She tries to make an impact on her immediate family in Japan and on her extended family in China. Her writing reveals her as a responsible world citizen.

Japanese Impression

The last work we will present was written in Japanese when Lala was in fifth grade. In this narrative, Lala described a school activity in which team members worked together to read a map to find their way to each teacher, who then gave them a quiz that they must answer in order to move on to finding the next teacher. It is an impression written after a school activity. The school she attended was small, so all the grade levels engaged in outdoor activities together and the school principal promoted the practice of writing impressions about such activities. Her fifth grade teacher required impression writing only infrequently, and he did not require the students to write as often as Lala had in third and fourth grade. Also, Lala began attending *juku*,

after-school lessons in math, language arts, and science. So she did not have much time to write at home for her own purposes as she had in third grade. Lala's body of written work in fifth grade was much smaller than in the previous years.

Enjoyable, Exciting Picnic

On May sixteenth, we had an exciting picnic. We went and came back on foot, so our legs became more and more heavy. At first we tried to reach the goal as fast as we could so we chose a short cut and arrived at Ms. Nomura's place. But from there we became more and more lost. So we took out the map and had a look and went back to the place of Ms. Nomura.

From there we were able to find the other teachers. After answering the quiz from Mr. Yamada, homeroom teacher of second grade, about ten meters from him, we saw a first year girl fall down on the ground. Her legs were bleeding. The leader said, "Can I carry you?"

She said, "No." So listening to her words I felt how stubborn she was as a first year girl. But I saw the blood came out of her mouth more and more, and her steps became weaker.

So the leader said again, "Can I carry you on my back?" But the girl seemed she didn't want to be carried. Her arms and legs were wobbly and it was hard for her to jump on the back to be carried.

I was called because I had a brother and was used to carrying my brother, so I immediately carried her to the place of Ms. Kimura then to the main office for treatment for her injuries. Although it had many troubles, this exciting picnic was fun for me.

The heteroglossic voices and the literary language found in this piece of writing illustrate how Lala explored overcoming obstacles and solving problems in her social world. The heteroglossic voices in this writing were an English loan word and Japanese maxims. The literary language included repetition, alliteration, and opposites. Lala used the word *goru*, goal, an English loan word. This word was spelled with the alphabet used for foreign words and can be found in sporting events and games. The repetition and alliteration in words such as *waku waku*, exciting, *don don*, more and more, and *chikamichi*, short cut, have the effect of recreating the children's sense of urgency as they read the map and rushed to each goal. Lala also used binary opposites, *tsuyoi* and *yowai*, to describe the first-year girl's strong mind and her weak legs. This narrative ends with another opposite pair, "Although it had many troubles, this exciting picnic was fun for me." The contrast between "many troubles" and "fun" suggests that for Lala, overcoming obstacles is what makes an event worthwhile and enjoyable. Lala showed agency by solving the problems of becoming lost and finding a hurt child and helped her team toward a social purpose within the school setting.

This narrative connects with themes in the previous two pieces of writing. In all three, Lala was concerned with helping others. In all three, Lala showed agency through her interventions and her words. In the *nikki* writing, Lala helped her family to be more physically active, avoid causing air pollution, and she helped her brother achieve a goal. In the speech, Lala encouraged her father and grandparents to avoid causing pollution and took action to help others by saving her money to donate to disaster victims. In the final narrative, she took action to help her team and to help a little girl who was hurt. The three pieces of writing, from three consecutive years show that Lala was developing into a caring, concerned citizen. Lala ultimately used writing

to achieve a social purpose and influence a wider audience when her Chinese speech was published in a newspaper.

The three pieces of writing also show us how Lala was developing as a writer. Lala drew upon resources to write, such as proverbs, books, news reports, and people. She internalized aspects of Japanese language that helped her compose, such as using alliteration to stress action, and using repetition for emphasis. She discussed her writing with her mother in both Chinese and Japanese in order to write in Chinese, using flexible bilingualism to accomplish writing tasks in each of her languages.

Discussion

The analysis of Lala's three compositions revealed aspects of agency and flexible bilingualism. In this discussion, we connect previous work on agency and flexible bilingualism with the current study.

Agency

Looking across the three written works over a time span of three years, it is clear that Lala continued to address themes that were important to her. When she was confronted with obstacles in life, she relished overcoming the obstacles. It is also evident that Lala demonstrated agency in nurturing the actions of others such as her brother, her father, and her peers. When her brother could not succeed at the monkey bars, she comforted and motivated him until he was successful, demonstrating the power of words. When her group became lost during a school activity and they found a hurt child, Lala expressed agency in solving the problems. Lala also extended her agency to problems in society such as natural disasters and environmental issues. She expressed agency by asking her father not to drive the car, and by asking her grandparents in China to recycle items from their trash. Lala made the decision to not eat potato chips in order to help prevent deforestation. As Lala learned about problems in the world, she responded as a responsible world citizen. Lala's writing was strong because of her sense of agency. She understood that words have power and actions can make a difference.

Previous research on multilingual writing has shown how children use multiple languages in identity development and agency. Kabuto (2012) described how young children used English and Japanese scripts in identity formation when writing at home. Maguire and Grave's, (2001) analysis of bilingual students' daily journal entries revealed children's views of the world and their sense of selves as writers. Multilingual children must develop an identity that includes multiple languages and cultures. Writing teachers can facilitate identity development through providing opportunities for children to draw upon all their linguistic resources. Teachers can encourage writing at home or in school using journals, or open exploration notebooks. Parents can be encouraged to provide materials and opportunities for children to write at home and in multiple languages.

Harman and Varga Dobai's (2012) study provided the opportunity to write about social topics that were meaningful to the students. They expressed agency by researching, revising, and disseminating information on discriminatory practices. Multilingual students have real concerns about social issues. They may experience discrimination or bias in their social life both inside and outside school. They are often globally aware, due to familial ties to multiple countries. Teachers can learn about students concerns through analysis of their journal writing and explore some of their concerns within the school curriculum. Japanese approved textbooks contain examples of social issues such as the large amount of trash discarded each day in Japan,

and the declining physical activity of Japanese children (Sanseido, 2015). Children's own concerns can be connected to the curriculum through exploratory writing.

This study adds to the literature exploring discourse analysis of student generated writing. Such analysis reveals the complexity, identity development, and social concerns embedded in written works. Lala's three writings reveal how she was developing her identity and agency as a helpful, encouraging person, who cares about the environment. She was not afraid to express her views to others and encourage others to act in accordance with her views in order to improve the environment and improve society.

Flexible Bilingualism and Translanguaging

Flexible bilingualism and translanguaging were used by Lala and her mother. Flexible bilingualism was used as a strategy within the process of writing and resulted in a persuasive speech for a contest. Such bilingual strategies have also been found in classrooms. Flexible bilingualism has been used by teachers to link the social, cultural, community, and linguistic domains of student's lives (Creese & Blackledge, 2010). The multiple languages in such classrooms overlap languages, rather than artificially separating them. Multilingual students engage in literacy practices using various languages outside of school. Although school literacy practices are of consequence for developing academic identities, non-school settings are equally important in the overall development of students' identities (Haneda, 2006).

Lala and her mother moved fluidly between Japanese and Chinese in the co-creation of the speech. First, Lala wrote a draft of the speech using as much Chinese language as she could on her own. She used Japanese words and phrases when she did not know how to express the idea in Chinese. Then Lala asked her mother for help in thinking of Chinese phrases. Through this interaction, the mother-daughter pair engaged in flexible bilingualism, in which the boundaries between the languages were permeable (Creese and Blackledge, 2010). By discussing the ideas in both languages, Lala developed concepts that could be described in both Japanese and Chinese.

Lala and her mother used translanguaging, drawing upon multiple languages to communicate (Canagarajah, 2013; Garcia and Wei, 2013). Moving between languages was the usual method of communication for Lala's family. Spence observed Lala's family engaging in translanguaging in informal dialogue in their home during each of the four research visits. For Lala's family, translanguaging was a natural way to communicate. This was clearly beneficial to Lala as she developed as a writer of Chinese and Japanese. Yet, this strength was seldom drawn upon in Lala's school life.

Lala is now in sixth grade and to date, has only once been asked by her teachers to use Chinese in school. At that time, the class was studying classical Chinese poetry, written in Japanese. This is a conventional unit of study in Japanese elementary school. However, in this case the teacher asked Lala to read a poem with original Chinese pronunciation for the whole class to hear. Lala was a bit shy, but performed the reading to the best of her ability. Multilingual students have linguistic abilities that can be valuable assets for their own learning and to share with others. These assets should not be ignored by educators. Although there are ethnic schools in Japan (Japanese-Chinese, or Japanese-Chinese-English), they are not protected under the Japanese Education Law Act (Sakamoto, 2012). Hence, Japan does not currently place value on developing children's languages other than Japanese and English. This study adds to the argument for valuing multilingual educational practices, such as incorporating flexible bilingualism into writing instruction.

Early language experiences are important in developing multilingual literacy. Lala's Chinese writing highlights a combination of experiences that led to multilingual literacy. These experiences were: early learning of Chinese literacy, continued exposure to Chinese in a variety of venues, and using translanguaging and flexible bilingualism in order to express ideas in writing. By revising the speech with her mother's help, Lala was successful in writing and performing a polished Chinese version of her speech for the contest. Her speech was also published in a Chinese language newspaper. Early exposure to languages, continuing development of languages and utilizing flexible bilingualism are valuable practices that educators might draw upon in crafting curriculum and policy.

Implications

Discourse analysis using Generous Reading is one way to analyze student writing, revealing who students are becoming as people in relation to society. Through her writing, Lala is seen as a person who thrives on solving problems and helping others in difficult situations. This can be seen in her simple narratives of family and school life, as well as the speech she wrote to express her dreams for the future. Often educators do not look beyond surface features of writing such as spelling, handwriting, grammar, and organization. They never see the person behind the writing, even when the words are clearly describing that person's ideas. Educators should take the time to read student writing, thinking about who the student is becoming and what the student is thinking. Discourse analysis can also help educators to see what the student is doing as a writer. By noticing their literary language, educators can see that students have internalized aspects of language such as alliteration and repetition. Students use metaphors, proverbs and symbolism without intentionally trying to embellish their writing. Educators should pay attention to what students are doing with language in their writing. This information also reveals aspects of the student's life such as their interests and concerns.

Parents and family members of multilingual children are tremendous assets in helping educators understand how children are translanguaging (Canagarajah, 2013; Garcia and Wei, 2013). When given opportunities, children will use all their linguistic resources to develop themselves as people in society and as writers. Teachers and parents should share student writing and together discuss the child as a person and how the child is using their linguistic repertoire in speaking and writing. Teachers could ask how language is used in the home, and encourage the family to discuss ideas in multiple languages. Homework assignments that include opportunities for translanguaging would be beneficial to students' writing and language development. Pre-service teachers would also benefit from learning how to accomplish a generous reading in order to provide them a better understanding of student writing. Finally, policy makers should consider the benefits of bilingual education opportunities. There is very little opportunity for Mandarin Chinese development in Japan, yet the development of bilingual Chinese can benefit Japanese society, filling a need for translation services and intercultural understandings.

Conclusion

This discourse analysis adds to the research on translanguaging and flexible bilingualism. By exploring one child's Japanese and Chinese writing over three years, we have shown how this child continued to write about themes that expressed her agency as a family member, a member of a school team, and as a responsible citizen. The study also revealed how translanguaging was used in the home setting and in academic writing for a speech contest. The mother and child engaged in flexible bilingualism, stimulating the development of biliteracy. The discourse analysis method uncovered heteroglossic voices and literary elements in writing and provided

insights into the child as a person and as a writer. In future studies, this method could be used to analyze the writing of multilingual students in classroom settings in order to see how writing ability in multiple languages can be developed through flexible bilingualism in the classroom.

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Appendix

Lala's third grade Japanese writing

1 1 月 2 6 日 月曜日「三年生」

わたしは、きのう、お天気がよかったのでつるみりよくちに行きました。
 いつもなら、車だけど、わたしがお父さんに、「自てん車で行こうよ。」
 と、いいました。そしたら、お父さんが、
 「いいよ。」と、いってくれてうれしかったです。
 そして自でん車で何分かこいてたら弟が「あ、つるみりよくちがあったよ。ほらみて。」
 と、いいました。そしたらみんなもきづいて、「ほんまや。」
 といいました。そして、子ども広場にいて、いっしょけんめい遊びました。わたしは、とにかくうんていであそんでいると、前に弟がいっしょけんめいうんていでがんばっていました。わたしは、「がんばれ__。」
 といいました。けれど弟が半分でおちたり、あといっぽんでいけたところをおちらり。とうとうないでしまいました。わたしは、弟のそばにいて、
 「だうじょうぶ。ぜったいいつかできるよ。」
 となぐさめてあげました。そしたらなきやんで、弟が
 「もう一ど、うんていを、がんばるから、おねえちゃん、しっかりみていてね。」
 と、いってくれました。それから一回目、さいしょうからさいごまで弟がいけました。わたしは、「よく、ここまでがんばったね。おめでとう。」
 といいました。弟はえがおになって、「ありがとう。」
 といいました。とても楽しかったです。また行きたいです。

Lala's Chinese fourth grade writing

我的梦想 李晓（女）10岁 小学四年级 日本大阪

我长大了，想当一个对社会有用的人，帮助那些需要帮助的人，并且全力保护地球环境。

我现在是小学四年级学生，还不能直接去帮助别人，但是我可以做两件事情。第一件事情是我可以积攒一些零花钱，积少成多，就能做一些善事。我每天都帮妈妈做一些家务活儿，

洗碗，叠衣服，收拾屋子，照顾弟弟等等。这样妈妈一个月给我四百日元，我把这些钱都攒起来，从来不乱花。在中国发生大地震时，在日本海啸时，我和家里人都捐过钱。在电视里，我看到一个地方每年都发大水，把学校都冲了。孩子们没有学校，不能学习，非常可怜。我长大了，一定好好工作，攒更多的钱给那些孩子建新的学校。

另外一件事我可以做的是保护地球环境。在日本，把垃圾分类是一个保护环境的好办法。不仅可以减少对大气的污染，还可以节约能源。但可惜的是中国在这方面做的不好。我要告诉我在中国的朋友和亲人，教给他们把垃圾分类处理。另外，汽车尾气会污染环境，所以我经常劝告我爸爸，不让他开车出门。我真想大声呼吁，少开汽车吧！还有，我决定不吃土豆片了。土豆片好吃是好吃，但需要很多很多的椰子油。很多地区为了制造更多的椰子油，砍了大片森林种上油椰子，这样导致了生态被破坏，动物们无家可归。这是我在一本书上看到的。所以我不吃土豆片也是对环境保护做贡献。

我的梦想是做一个对社会有用的人。我要从现在做起，从一点一滴做起。

Lala's Japanese fifth grade writing

楽しかったわくわく遠足（五年生）

わたしは5月16日にわくわく遠足へ行きました。

行きも帰りも歩いていったので足がどんどん重たくなっていきました。

最初は、できるだけ速くゴールに行きたかったから、近道をして中東先生の所に行きました。

けれど、そこからは、どんどん道に迷ってしまいました。そこで地図を見て、また中東先生の所へもどってしまいました。でも、そこからはどんどん先生たちを見つけていき、2年生の担任の西川先生のクイズに答え終わって歩いて10mくらいのところで、一年生がころんでしまいました。足からは血が出ていました。そこでわたしは、

「おんぶしようか。」

と聞いたけど、「いやだ。」

と、言われ、わたしは、「一年生なのに強いな。」と思いました。けれどきず口から血がどんどん出ていて、あるいてもよろけるだけだったので、班長が、「やっぱりおんぶするよ。」といいました。

けれど、1年生は、されたくなかったなので、手や足をぶらんとして、おんぶができなかったので、わたしが、

「おんぶかわるよ。」

といいました。弟がいるので、おんぶをするのはなれているから、おんぶしてすぐに竹下先生の所へ行き、それから本部へもどりきず口をふせげました。

このわくわく遠足は、いろいろこまったこともあったけど、楽しかったです。



How to Practice Posthumanism in Environmental Learning: Experiences with North American and South Asian Indigenous Communities

Ranjan Datta

Abstract

This paper explores how to practice posthumanism in everyday life. This idea has increasingly come under scrutiny by posthumanist theorists, who are addressing fundamental ontological and epistemological questions in regard to defining an essential 'human,' as well as the elastic boundary work between the human and nonhuman subject. Posthumanism is essential for considering today's environmental problems and environmental science education. This paper then has three goals: developing posthumanist ontology, exploring methodology, and investigating whether environmental science education and practices can help students, teachers, and community in learning, teaching, and practicing processes. I demonstrate the complementary contributions from two Indigenous communities' field studies that can be made when a researcher moves beyond an exclusive focus on western interests and considers participants as co-researchers. This paper concludes with a discussion of implications for this field.

Keywords: human; posthumanism; ontology; methodology; practices; Indigenous

Introduction

It is a fact that posthumanism has gained a strong foothold within human geography and environmental sustainability (Castree, Nash, Badmington, Braun, Murdoch, & Whatmore, 2004; Castree & Nash, 2006; Murdoch, 2004; Simonsen, 2013). At the same time, what is often neglected in analysis of practice is the suggestion of how to practice posthumanism (Whatmore, 2013a). This paper aims to explore how a posthumanist ontology and methodology can be developed. The focus is given not only on philosophical discussion, but also on connections between theory and practice.

Humanism as a philosophical approach has long been problematic in environmental and science education. It claims that the figure of ‘human’ naturally stands at the center of things; is entirely distinct from animals, machines, and other nonhuman entities; is absolutely known and knowledgeable to himself, is the origin of meaning and history, and shares with all other human beings a universal essence (Whatmore, 2013a). Whatmore (2013b) further argued that it “is a mistake to posit humanity (culture) as somehow existing apart from the world of things (nature); rather, the human comes into being with this world” (p. 6). Haraway (2004) also criticized humanist projected knowledge processes and asked how, when, and why did we become human? Haraway (2004) strongly criticized artificial projected knowledge and argued that scientific projected knowledge has created *Homo sapiens* as pioneers, opportunists, and survivors. Likewise, Latour (2001) also rejected the assumption that human actors have a special status; instead, the activities of things and humans should be taken into account in the same way when examining social reality. Thus, Latour (2004) and Canadian Indigenous scholar Little-bear (2009) suggest that we need to redefine all social actors, both human and non-human from everyday practices. The term everyday indicates a way of thinking about the places in which we live; maintain relationships, and the spaces we move through on a daily basis (Herbert, 2000).

Posthumanism, Whatmore (2013a) and Haraway (2004) identified, is a crux in understanding relationships between people and the material world. The term material explains our relationships with our physical, mental, and spiritual environment (Castree, 1995). Practices in posthumanism have emerged in feminist and poststructural thought and include many different relational approaches. In a recent and cogent reflection, Castree and Nash (2006, p. 501) identified that posthumanist practices can be seen as disturbances on humanity, for example, new biotechnology, or as an idealized definition of the posthuman subject as separated and liberated from human. Fukuyama (2003) also asserts that new biotechnology threatens both the very definition of a human being and the existing social fabric. Posthumanist practice can be explained either as more-than-human thinking and doing or as a fracturing of the human subject (Latour, 2004; Simonsen, 2012).

My intention, however, is not to promote posthumanism as the largest term or name new theoretical directions or rename established themes. This paper’s main target is to explore how to practice posthumanism in everyday practices. For this, I first discuss how to develop posthumanist ontology. Second, I explore methodology. I then point to how to practice posthumanism in everyday practice through two empirical experiences with Indigenous communities (Datta, Khyang, Khyang, Kheyang, Khyang, & Chapola, 2014; Ginn, 2008). Finally, I discuss my everyday environmental learning experience with two field studies: The Laitu Indigenous community in Chittagong Hill Tracts in Bangladesh and the Dene First Nation community, Fund Du Lac, Saskatchewan, Canada. I learned from both studies how practice-based learning can have diverse impacts in our research and education such as (a) it can disturb the western notion of only human-oriented learning; (b) it can claim to reframe research and

education to focus on how we are always already related to animals, plants, and machines, and things within everyday practice; and (c) it can enable us to begin exploring new posthumanist directions in research, policy development, curriculum design, and pedagogy practices.

Posthumanist Ontology

Envisioning the future of both posthumanism and everyday practices, it is clear to those working in political ecology and others in human sciences that posthumanist ontological understandings of the world are the key to a process of practice that values and enacts environmental education. Ontology corresponds to multiple relational realities; “there is no one definite reality but rather different sets of relationships” (Wilson, 2008, p.7). Drawing from Whatmore (2013a), Haraway (2004), Latour (2004), and others (e.g. Escobar, 2008; Little Bear, 2009), I proceed by articulating a basis for engaging “practices,” not as static, but as simultaneously shaping and being shaped by more-than-human relationships.

According to Whatmore (2013b) a posthumanist or more-than-human theoretical approach is significant for understanding everyday relationships (i.e., both human and nonhuman). She suggests, “Living/ness is a relational condition that reconnects the intimate fabric of corporeality, including that of human becoming, to the seemingly indifferent stuff of the world that makes living possible” (p. 4). Whatmore suggests that posthumanist ontology is able to challenge human prioritized ontology. Whatmore argues that humanist ontology (i.e., ways of knowing relationships) is constructed and structured. Whatmore (2013a, 2006) states that posthumanist ontology centers on questions such as how the world makes itself known, the powers and forces that make our everyday life, political structures, economic arrangements, and so on. Her idea of posthumanist ontology helps us to understand what human and nonhuman relationships are in practice.

The posthumanist ontology deeply relies on the concept of *heterogeneity* (Murdoch, 2006). The term heterogeneity denotes the condition of being composed of different elements; the uses of the term are neither uniform nor are the differences or similarities of the related terms obvious. It is rather a complex assembly of relationships (Merkel & Weiffen, 2012). The poststructural geographer Jon Murdoch (2006) posits that heterogeneity in environment (i.e., geography or environmental sustainability) helps us to understand the complexities of human and nature relationships where nature and society are outcomes rather than causes. In heterogeneity both humans and nonhumans construct each other. He further explains that heterogeneity is significant in practice as it answers a number of questions such as: What is left out in humanism? Why is it important to know the diversity? How the social life of humans did construct us as being?

Post-humanistic ontology is interconnected thinking; it is neither singular nor a different discipline (Simonsen, 2013). Posthumanism in practice considers everything as mixed, for example, environmental management is relational and includes spiritual practices among human, animals, plants, birds, land, forest (Ingold, 2011; Little-bear, 2009). Whatmore’s (2013a) also points out that posthumanist ontology considers relationships a significant concept which is able to open our mind, bodies, diversities, and possibilities. Relationships suggest a significant move from human family (i.e., singular western thought) to the existential family (i.e., diverse but interconnected thoughts) from human rights to existential rights. She further explains that relationships are considered a political conception which can connect us with everything, and shapes others as us. In developing posthumanist ontology, Whatmore and others (Agamben, 2004; Derrida, 2003) suggested three kinds of views.

The first view challenges human historical conditions through biotechnology and genetic science (Fukuyama, 2002). Fukuyama (2002) and Whatmore (2013a) suggest that biotechnology created a kind of crisis on humanity; a crisis of ‘human’ thinking. Fukuyama (2002) gave examples from genetic science engineering, which can modify us and our known ideas. Haraway (2004) similarly explains through posthumanist ideas (e.g., genetic science) that we can reshape ourselves from our everyday practices. Thus, Whatmore (2013a) thinks that posthumanism is fundamental to environmental history in challenging the western idea of human.

Second, deconstructing the figure of ‘human’ (western sense) (Agamben, 2004; Derrida, 2002). Agamben (2004) and Derrida (2002) argued that the concept of ‘human’ needs deconstruction. Both Agamben and Derrida asked why and how the ‘human’ idea deploys through the politics of power. For example Escobar’s works (2011, 2010) explained how the ‘human’ idea became prioritized in modern humanist politics over the traditional every practice.

Third, (re)making the human/body/ecology through *choreography* concerned with relational practices or networks (Whatmore, 2013b). According to Haraway (1991) choreography means remaking ideas from a material sense, not a linguistic or figurative sense. In this theoretical thought, the boundaries (e.g., body/human/ecology) are highly fluid. The boundaries are explained as constructed in historical processes. The main focus is on diverse and alternative ways of understanding the concept of human as more-than-human.

In sum, posthumanist ontology can be seen as various relationships that connect us in complex networks (Latour, 2004). Murdoch (2006), Latour (2004), and Whatmore (2013 a & b) advocate for alternative ontology that rejects western dualisms such as fact and value, human and nonhuman, along with nature and culture, and rather looks to emphasize relations between entities. Thus, like Murdoch (2006), I also see posthumanist ontology in practical life as how “the mingling of various entities in complex assemblages, networks and/or systems, might now comprise geography’s main intellectual concern” (p. 196). Therefore, in posthumanist ontology there is a need to put the idea of relational politics into our everyday practice

Methodology in Posthumanism

Posthumanist methodology relies on Haraway’s (2004) and Whatmore’s (2013a, 2009) concepts of *interdisciplinary* and *knowledge controversies*. For explaining these two concepts in a posthumanist methodological framework, Whatmore (2013a) identifies three significant concepts: amplifying inter-corporeality, mapping into knowledge, and redistributing expertise. Such concepts answer a number of methodological questions: how do we study the human environment and why do we study the human environment differently with posthumanism. Both of these concepts (interdisciplinary and knowledge controversies), as Haraway and Whatmore explain, are able to breakdown the boundaries among human and non-humans.

The first aspect is *amplifying* which means interconnectedness or fluidity in posthumanism methodology (Whatmore, 2013a). Whatmore defines interconnectedness as different ways of thinking, as all bodies (not only human bodies rather all kinds of bodies within earth), as a whole body. According to her, our body is not only controlled by our cognition, but also our cognition also can be controlled by our body. For example, if our finger touches anything, it has effects on our entire body and/or our cognition. So the idea is that our finger has the ability to control our cognition, instead of our brain having complete control of our body. New bodily approaches need to evolve from amplifying in posthumanist methodology. Haraway (2004)

also makes a similar point, that our knowledge interferes by a set of factors, and each setting has relational influences on the others. Similar arguments are made by Indigenous scholars Smith (2005) and Wilson (2013) that all action is relational. Such relational actions help us to understand how we come to know, and how we can achieve our goals.

The second aspect is *mapping into knowledge*. Whatmore's (2013a) mapping is the idea that through training we can control our bodies and capacities to move in the world and to sense the world and how other kinds influence us. Drawing from Latour (2004) and Haraway (2008) Whatmore (2013a) explains that mapping into knowledge is an idea that we need to learn and practice to understand these kinds of effects on us. Mapping into knowledge is the ability to influence the way the world wants to speak to us.

The third aspect is *redistributing* expertise. According to Whatmore (2013a) our knowledge needs to redistribute in collaborative ways, for example working with science and collaboration between science and public policies by the source of knowledge that we want to build ourselves. Redistributing expertise is a deconstruction of our material understanding of the ways of understanding, the way in which we relate, and the ways in which we act with our material world (Haraway, 2004).

The three points previously discussed are helpful for understandings the concepts of *interdisciplinary* and *knowledge controversies* (Whatmore, 2013a; 2009). The interdisciplinary notion is significant posthumanism methodology (Haraway, 2004). Whatmore (2013a) explains the concept of interdisciplinary through the term of 'disciplinary in-between'. Instead of multidisciplinary (i.e., collection of disciplines), the disciplinary in-between term lead us toward disciplinary coherence. The disciplinary in-between has many similarities with interdisciplinary understandings and practices. Whatmore (2013a; 2013b) pointed to a collaborative methodological framework and gave examples that both (human geography and environmental sustainability) have shifted from disciplinary to collaborative disciplinary in-between (such as: science and technology studies (STS), performance arts, and animal studies). Thus, the interdisciplinary concept is a significant concept for posthumanism methodology in bridging science, technology, natural and social sciences as whole.

In addition to the interdisciplinary concept as a significant turning point in post-human methodology, the *knowledge controversies* are also a vital concept to create political ideological urgencies (Whatmore, 2013a; 2009). Whatmore (2009) explains three different political implications for redistributing expertise including: first, knowledge controversy aims for enabling interested citizens to trace the 'partisanship' of scientific knowledge claims; the second is accounting for the political force of techno scientific controversies by mapping the intense entanglements of scientific knowledge claims with legal, moral, economic and social concerns on the web; and the third is meshing the borders of animal/machine, social/material, flash/information, cultural/natural.

In sum, Whatmore and Haraway's contributions are helpful in order to develop a posthumanist methodological framework. Such a methodological framework is able to question humanists along the lines of: What are the underlying assumptions of post-human practice? To whom are we giving voice and agency, and at whose expense? And, which forms of science knowledge and practice are privileged and which forms are relegated to the margins? Therefore, I think a posthumanist methodological framework provides not only new representations, but also includes new forms of practices and other ways of living that result in humans and non-humans together.

Posthumanism in Practice

Example A: Experience with Laitu Khyeng Indigenous Community, Chittagong Hill Tracts (CHT), Bangladesh. Exploring an Indigenous perspective on meanings of land, management, and sustainability were at the heart of this research, we tried to demonstrate how research can be used to involve empowered participants that challenges different agencies' (i.e., government and non-governmental) anti-community land and forest management policies, and also to explore the linkage between traditional cultivation practices and sustainability. As such, our research engaged participants of community Elders, knowledge-holders, leaders, and youths in research processes such as conducting research, data analyzing, and identifying research themes that encouraged critical thinking, taking responsibility, and building community-based sustainability. This was a collaborative and participatory research journey that included an academic non-Indigenous researcher, Indigenous participant community co-researchers, Elders, leaders, and knowledge-holders who collaboratively owned research results (Datta et. al., 2015).

Research participants were engaged throughout our research by collectively identifying research questions and collecting and analyzing research data. As part of our posthumanist methodological framework we acquired consent during each research method process such as: traditional collective story sharing circle, individual story sharing, photo voice, and participant observation. We shared our community co-researcher translated transcripts with each participant and requested them to add and/or change anything our participants wanted. Throughout our research we followed Laitu Indigenous research protocols.

This posthumanist research focus was concerned with building a space in which participants felt enabled to share their stories, as well as explore possibilities and actions in sustainability. As a result, throughout the field study, the participants steered their traditional cultivation culture and took an active stand against different agencies' anti-community land management policies, in order to achieve their own sustainability goals.

We chose to use a posthumanist methodological framework of relational participatory action research (PAR) methodology in order to include and engage participants in meaningful participations. As one of the Elder participants shared:

This PAR is different from other research approaches as this PAR not only created a knowledge sharing space for writing our own oppressions and suffering stories, but also put our voice, our needs, and our abilities at its center (Datta et al, 2015).

To support posthumanist methodology as a relational PAR we drew a number of methods and techniques to engage participants in conducting field research, analyzing, and identifying themes that were important to them.

Drawing from posthumanist ontology, one of the main concerns was to explore meanings of land from community perspectives. According to the community's perceptions their land is interconnected. For example, both Elders and knowledge-holders participants described that the meanings of land and water are interconnected with both human and non-human. In addition, both are considered to be available for everyone. For example the Elder Kosomo Pure Khyeng explained:

Land and water are everything for us, including: our cultivated land, uncultivated land, food production, water, birds, animals, hills, the sky, winds, insects, plants, trees and feelings as well as spirituality, sounds, father-mother, brother and sister, and many

others. Land and water are for both visible and invisible things such as: visible things are human, animals, birds, crops, lands, insects, mountains, rocks, moon, sun, water, and so on; and invisible things are our feelings, winds, smells, sounds, spirituality, and so on.

It is revealed by our participants' stories that the community does not see a difference between human and nonhuman. These two concepts (i.e., human and nonhuman) are indistinguishable. For instance, Elder Okko Khyeng explicitly stated that "We do not differentiate ourselves, animals, plants, water, and land. For us, we are collective."

Both Elders and knowledge-holders describe the meanings of land and water as relational practices. For example Nyojy U Khyang gives an example in his commonplace book, stating, "When we climb up to a big tree for food, we pray and ask permission from the plant by saying, 'Do you allow me to take your creation (fruit) for us?'" He wrote that, "The community believes that if they ask permission to the trees, indicating the community may not overuse their resources, the trees may continue blessing the community."

In relational practice, the community acknowledges (mainly Elders and knowledge-holders during first sharing circle) the plants and trees by praying, "We will not hurt you and will not take more than we need," explains Nyojy U Khyang.

In contrast, it is clear from our participants' discussions that the current government and non-government agencies' definitions and meanings of land differ from the community's understandings and management practice. Participants explained that the outsider, non-Indigenous agencies' land and forest management policies (i.e., mainly projects) have focused on projected knowledge and economic profit instead of traditional relational practices that have never been intended to benefit the community. According to Elder Basa Khyeng, the different agencies' anti-community management policies (i.e., prioritized profit for outsiders) rendered the community essentially unsustainable.

It became obvious during the study that participants challenged the current government's profit oriented idea of land and management. The knowledge-holders Ching Cho Khyeng expressed that different agencies' profit oriented definitions of land and management have created serious challenges for the community's traditional management practices. According to him, outsiders' definitions promote suffering, exploitation, and displacement. The community's everyday relational and spiritual practices of Mother-land, forestland, and water bodies (i.e., lakes from hills' waterfalls) were transformed as a source of profit in the different agencies' (government and non-government) projects.

In order to understand traditional meanings of land and water, it is evident that participants—particularly Elders and knowledge-holders—position their understanding of land and water in their everyday relational knowledge and practice. Like posthumanist ontology, the community's attitude towards land and water is also based on relational practices, and they are obligated to care for, honor, and learn relational practices in their everyday practices.

Example B: Experience with Dene First Nation Community, Fond du Lac, Saskatchewan, Canada. Posthumanist learning from traditional cultivation culture and spirituality stories have the power, perhaps, to recreate posthumanism in science if we, as researchers and educators, are willing to consider a relational theoretical framework and place-based approach (Datta et al., 2014; Escobar, 2011, 2008, Massey, 2004; Willson, 2008). This informs the approach we took with a group of students in an attempt to lead them to a state or center of their traditional knowledge whereby they would challenge current hierarchical science and environmental

education. The Dene First Nation community is situated on the east side of Lake Athabasca (Treaty 8). According to Fond-du-Lac School Principal, Fond-du-Lac is one of the oldest settlements (colonized) in Canada. I was part of the science and environment science ambassador program in spring 2014 from the University of Saskatchewan, Saskatchewan, Canada. One of the Elders argued that the classroom settings (i.e., particular ways of knowing) teaching science does not include proper connections with their traditional practices and learning.

Like posthumanist ontology, the Dene First Nation community does not consider human as a separate entity from their environmental entities (e.g., plants, animals, sun, moon, forest). For example, one of the nine students expressed that “We are not human [according to scientific sense], we are First Nation”. I invited him to elaborate on his comments. He further explained, “We are everything, and our science education is also about everything, such as: our Caribou, our birds and our lakes, the plants and the sun along with the moon, our stones, and our land” (see figure 1).



Figure 1. Relational meanings of human beings. One of the grade nine students (from Dene First Nation community) drew this art work to explain their relational and scientific education.

A similar story was explained by an Elder, that everything in the environment has purpose and scientific meanings. The Elder commented about more than human views of environmental science in their practices, “if our traditional stories can bring successes for present and future, why should we not consider our traditional stories as scientific knowledge. Our scientific education is defined by our relational practices, care for our environment, and natural laws.” He further explained that science “comes from land and goes back to the land.” He also believes, “if we are able to learn science from our relational and spiritual practices, we neither need to create artificial science or our science will get lost.” He further comments that relationships with both human and non-human are scientific ceremonies; each action has scientific meaning and purpose to him and to the community.

Posthumanist ontology in practice is considered as relational responsibilities in the community (see figure 2). For example, one of the Knowledge-holders explained that every relationship is considered a significant responsibility to the community, and it begins with *me*. Every

individual is responsible for maintaining their relationships with their animals, birds, plants, and fish. He used the word *me* to explain that responsibility starts with me; everything is dependent on my responsibilities. He said our relational responsibilities have scientific meanings that “we will respect, honor, and care for everything, for instance: our land, animals, plants, fish, lakes, and so on.” One of the Elders considers this practice as human and non-human’s relational responsibilities, and through these responsibilities Dene communities are connected with everything. For example, the animals (such as the bear and caribou) have spiritual and relational meanings to the Dene First Nation. The animals have deterring power in hunting, producing and distributing food, and predicting weather. The wing refers to birds (e.g., Eagle, Crow). Each bird has a different purpose to the community, such as the Eagle is admired as a living symbol of power, freedom, and transcendence. The plants are used for many purposes (e.g., medicine, healing). The fish are used to signify water and the flow of life. Thus, one Knowledge-holder thinks their traditional knowledge has scientific value to them. Their practice-based science teaches them how they need to think together, see together, and act together. He said, “my learned science is from my everyday practices, including stories, arts, dance, and songs. Through our practices, we have been protecting our environment from generation to generation.” Therefore, he said, “science education is to me collective practices, which make us responsible in developing strong eyes and strong ears, to survive no matter where I go.” Therefore, Indigenous scholar Shawn Wilson (2008) argued that practice-based learning makes us accountable towards our relationships.

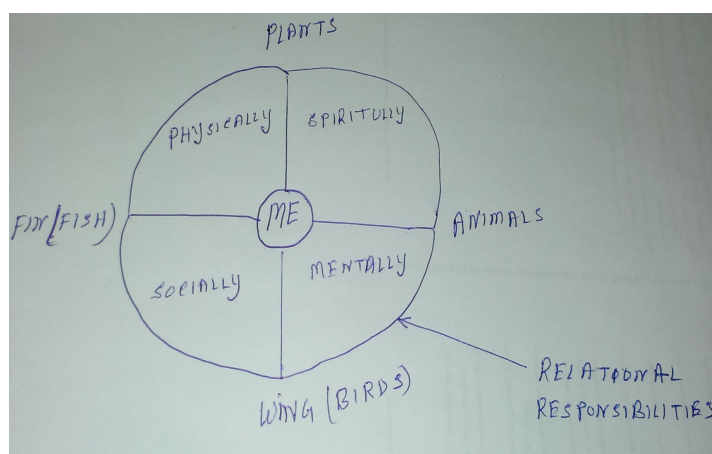


Figure 2. Relational responsibilities figure. Dene First Nation Knowledge-holder drew this figure during his collaborate talk in Fond du Lac school. This figure illustrates relational responsibilities in environmental science education from everyday practices.

Including posthumanism in modern science education is not easy; however, it is necessary if we (as a researchers, educators, and community members) wish to uphold traditional community-based science knowledge and everyday practices in our education systems. In relation to this argument I have asked a number of students their views on current environmental science study and their traditional everyday practices (i.e., hunting, fishing, clothing, and relations with ecology). Most students in grade eight and nine answered that they were more interested to learn different things from their practices. For example, the Elder explained that the traditional practices have given direction on how to think, how to look, and how to act when it came to conquering difficulties (see figure 2).

Grade eight and nine students explained that there were many differences between Indigenous and scientific ways of practicing and understanding science. For instance, one of grade nine students expressed that “we cannot share our science knowledge [classroom science

educations] with our parents or community members.” He explained further that “classroom science education doesn’t have similarities with our traditional knowledge and practices. In most cases, we need to memorize. If we are not able to memorize and we will not be able to write during our exam.” On the same point, a grade eight student expressed that “our science classes are not fun.” One of the science teachers also expressed that she had been facing difficulty acquiring science students in her class. She gave an example that “grade 6-12 classes have more than 100 students and she had less than 10 students. We also discovered similar difficulties during science ambassador experiments (such as DNA, optics, magnet, fossil findings, and other experiments) though I did not agree with their teaching techniques (i.e., particular ways of knowing, settings, and designs). One of the students also explained why she did not in particular like the ways of comprehending during environmental science education. For example she said, “We are not opposing science education. In fact, we need science education; however, we do not like memorizing science.”

It was a learning experience for me that many modern techno scientific (i.e., humanism) study curriculums do not consider traditional knowledge as a sustainable learning structure (Littlebear, 2009, 2000). For instance, during my science and environmental science experience I wanted to obtain students in a cultural camp. Cultural camp is an annual traditional knowledge sharing and activity camp. It is organized by the First Nation community particularly for community children. My co-science ambassador wanted to caution that “I should not change our classroom science and environmental teaching techniques for a less significant teaching technique [cultural camp].” He further argued that, “according to scientific study traditional knowledge does not carry significant scientific value, at least not according to my experience during my four years of core science study.”

Although I was seriously shocked by my co-science ambassador’s comment, I knew that individual personal opinions were not the issue, rather his own scientific education (Haraway, 2004). Moreover, one of the science teachers and my co-science ambassador commented that, “science has been created for particular skills and if students do not have particular skills they will not be able to understand.” Yet, one of the students commented that, “during science classes I feel bored since a large portion of class is having to memorize. Memorizing is not fun to me.”

Interestingly, student learning and views about science have changed greatly since inviting community knowledge-holders to our science class. We requested knowledge-holders to share practice-based science knowledge when following students during outdoor science activities and a school principal helped me in contacting community knowledge-holders for science class talks. From grade 6-10, classes of almost 50-60 students participated in knowledge-holder talks and outdoor activities. Students were divided into six groups and took several pictures with school provided iPads. During the outdoor activities, students took pictures of rocks, plants, trees, the lake and fish. They wrote many relational stories such as poems and storytelling, and created art to explain their relationships with their ecology and scientific understandings.

Discussion

The aim of this study was to explore posthumanism in everyday practices. The two empirical examples presented above demonstrate ways in which research can engage and cultivate communities. Indeed, it seems clear that practices in posthumanism are central (Whatmore, 2013a). Both of the studies’ results revealed that posthumanist knowledge is able to protect local people, their knowledge, and interest (Escobar, 2008; Berkes, 2012, 2003). Further, we have seen that post-humanist practices consider relational and spiritual knowledge as

significant sources of science. On the contrary, both studies' findings indicate that western human (i.e., profit) oriented definitions of science education and management have perhaps been too simplistic, too projected, and too far from local practice (Escobar, 2008; Haraway, 2004). Environmental science education and environmental resource management, both in Western science, are regarded as a concern of elites who are insensitive to local Indigenous people and their livelihood and needs (Bekers, 2003). Thus, Haraway (2004) and Franklin (2008) and others elsewhere argue that the more-than-human practices in management and environmental science education remains weak.

One important finding of the study in example A suggests that the current profit-oriented environmental resource management practices are artificial and projected. Experience from Laitu Indigenous community, CHT, Bangladesh shows that the expulsion of Indigenous communities' knowledge from the current government and non-government environmental management practice may result in their (local people) displacement and poverty by powerful outside economic groups. In current outsiders' profit oriented management policies, small Indigenous farmers, fishers, and forest users may not fit well with outsider definitions of management (Anderson, 2003, 2001).

The concept of posthumanist ontology has been one of the most powerful means of re-examining and reconfiguring everyday practices in a way that values diversity and honors interconnectedness among multiple actors. In the Laitu Khyeng context, posthumanist understandings of environment (i.e., land, water, and management) are significant for the community's land rights and identity. Such a correlation seeks to advance the discussion of Whatmore's concept of posthumanism as a means of understanding the transformative and dynamic interplay of cultural land practice. For example, as Elder Kosomo Prue Khyeng explained, "For us, both land and water are our parents, culture, and our identity."

I also learned from the Laitu Khyeng Indigenous community that posthumanist meanings of environment are connected to their strength (Escobar, 2008). For example, knowledge-holder Ching Cho Khyeng characterized traditional land and water practices as sustainable management practice." The knowledge-holder further stated that "our natural crisis [which is not imposed] is also our strength as our crisis also teaches us how to face challenging situations." Consequently, notions of more than human approaches are conveyed discursively through community operations in order to establish this strength.

In Example B, Dene First Nation Community, Fond du Lac, Saskatchewan, Canada, land-based learning was able to break the boundaries between humans and nonhumans. For example, a grade nine student's comments on human science broke the boundaries between human and nonhuman. This student explained that current science education in school "only benefits to humans and denies community's plants, animals, and other non-human rights. Such limited science education creates danger for community's traditional education of environment." A similar point was raised by Heimans (2012) that, "the bodies, human and other, which are produced through everyday practice... Practice is always both discursive and material; re-impose the messiness of bodies into accounts of practice" (p. 318). Similarly Latour (2004) argued that "without the nonhuman, the humans would not last for a minute" (p. 91). He further explained the importance of practice:

What is human, what is material and how they are related are what comes to--matter? Here then we can call on the material to become accountable...The argument here is that "objects as things" cannot and do not speak for themselves. They can be most articulately

heard when placed within the purview of practice. Practice can articulate objects; make them articulate (p. 318).

Similarly Elders of this study explained that western scientific knowledge has not only shifted from reality, but is also limited by its specific dimensions. This study's findings have similarities with Little-bears (2009) arguments that science is about new knowledge and reality (i.e., practices). The aims of scientific knowledge, as Einstein (cited in Little-bear, 2009) explains, is to seek something new or unknown from reality. In this view, environmental science education and knowledge definitions are not from outside of reality or limited by particular settings. Similarly Chalmers (2004) says science is derived from reality. "Science is to be based on what we can see, hear, and touch rather than on personal opinions [structured knowledge] or speculative imaginings" (p. 1). Dene First Nation students and their Elders suggest that science is always engaged with spiritual and relational practices, but the current western notion of science in education is from reality. Thus, Dene First Nation and other studies (Franklin, 2008; Heimlich & Andoin, 2008) suggest that both (researcher and research) need to diversify practice oriented learning and sharing processes on the basis of people who speak for both human and non-human and build constituencies for sustainability.

In this study, Dene First Nation students and Elders emphasized collaborative (human and nonhuman) practice oriented science education. To explain collaborative science education they focus on a community's relational and spiritual practices. Both Elders and Knowledge-holders explained that the language of spirituality and relationships were the window of reality. According to them, spiritual and relational practices can produce bridges among scientific notions and can create new knowledge. Such practice-based knowledge, according to Dene First Nation students is easy to learn, teach, and appreciate; class room oriented science education is much more difficult to teach and practice.

In summary, both study examples investigated how Indigenous environmental practice is needed as forms of knowledge, policies, and rituals in order to promote environmental sustainability. Both studies make a significant contribution to the existing literature in general, as well as contribute to the future of environment-related educational practices. The studies' findings reveal that "science education and practices are spiritual and relational celebrations." Their stewardship, learning, teaching, and practicing ethics may not fit well with western science education and management practice. Elders of this study explained that the practice-based complex learning systems are not only able to create collaborative learning and teaching processes, but are also able to break down the artificial boundaries among human/non-human, nature/culture, theory/practice, and body/mind.

In addition to the studies' findings, there were some limitations in both studies. First, in both studies the academic researcher's identity was non-Indigenous; however, in both studies Indigenous participants were considered as co-researchers and Indigenous people and their needs were a first priority. Second, both studies were conducted in non-Native language (i.e., English); but Indigenous participants were engaged throughout the research processes such as collecting data and analysis processes. Finally, as a posthumanist researcher I would like to make two arguments through both of the study experiences. First, it is useful to consider the local community and their needs. Their interests are a main and significant source of research knowledge and practice. Second, we need to shift our vision and develop empathy and respect (i.e., practice-oriented posthumanist ontology and methodology) for the needs, practices and voices of our participants.

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**Attitudes and Behavior of Ajman University of Science and Technology
Students Towards the Environment**

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Abstract

This study examined the attitudes and behavior of Ajman University of Science and Technology (AUST) students towards the environment according to their gender and college. The research was based on a descriptive approach. The sample consisted of (375) students (230 males and 145 females) from different colleges (Law, Information Technology, Mass Communication and Humanities, Engineering, Dentistry and Pharmacy). The Attitudes and Behavior Scale Towards the Environment (ABSTE) was used to investigate students' attitudes and behavior Towards the environment, and a questionnaire was used to evaluate the environmental sciences course. Results revealed wide differences in the environmental attitudes and behaviors between the undergraduate students enrolled in environmental sciences course and others who did not study the course yet. Findings also showed that females have higher positive environmental attitudes and behaviors than males. Students of Dentistry and Pharmacy colleges have higher positive environmental attitudes and behaviors than students of Law and Information Technology or Mass Communication and Humanities colleges. Engineering students have the least positive environmental attitudes and behaviors. The results generally assert the importance of environmental education in university.

Keywords: environmental education; attitudes, behavior; university students

Introduction

Environmental deterioration has emerged as a serious issue in the current world. The human factor is the largest contributor to the creation and exacerbation of many environmental problems that might advance into serious threats to humans and all living organisms (Gore, 1993). These environmental problems may increase greatly, mainly due to global negative activities or lack of environmental legislations in countries rather than individual activity. However, individuals with negative attitudes towards the environment will continue to pose problems regarding the environment (Uzun and Saglam, 2006). Individuals who have environmental literacy, awareness and sensibility might contribute to the solution of these environmental problems.

Environmental education has been viewed as an important approach to educate students about environmental issues, and to identify challenging environmental problems at all educational levels, including university (Fernández-Manzanal, Rodríguez-Barreiro, & Carrasquer, 2007; Tuncer, 2009). Therefore, environmental education is crucial to prepare environmentally literate graduates who will play an active role in protecting the environment by making informed decisions and engaging in environmental-friendly behaviors (UNESCO, 1980; Roth, 1992).

Literature Review

Environmental Education

The main aim of environmental education is to encourage citizens to act in an environmentally conscious manner that balances current social, economic, and environmental needs without compromising those of the future (Yorek, Ugudu, Salin, & Dogan, 2010); as well as to define and set goals at the cognitive, metacognitive, affective and behavioral levels (Sanera, 1998). Furthermore, environmental education aims to help people develop positive attitudes, emotions, thoughts or behaviors that increase their sensitivity towards the environment (Erten, Özdemir & Güler, 2003). Therefore, many studies put forward outcomes of environmental education that, given in different systems of education (formal and informal), enable people to: (a) develop positive changes in their attitudes and behaviors towards the environment (b) protect and sustain the environment. Thus, environmental education should be an essential part of education at all levels, including university (Grodzińska-Jurczak, Stepska, Katarzyna, & Bryda, 2006; Palmberg and Kuru, 2000).

Attitudes and Behavior

It is assumed in social psychology that an individual's personal evaluations are more informative of the person's attitude than what she/he claims to do (Eagly and Chaiken, 1993). Atkinson has defined attitudes as "favorable or unfavorable evaluations of/and reactions to objects, people, situations, or any other aspects of the world." They help us to predict and change people's behavior (Atkinson et al., 1996). To be precise, attitude can also be considered as an "overall evaluation that expresses how much we like or dislike an object, issue, person or action" (Hoyer & MacInnis, 2001, p. 128). Schultz and Zelezny (2000) pointed out that the attitude of environmental concern originates from the individual's concept of himself and from the degree of self-perception as a fundamental part of the natural environment. It is believed that behavior is what people do, whether it is appropriate for the environment or not (Hernandez & Monroe, 2000). In general, behavior is supported by knowledge and attitude, but the direct

connections between knowledge to attitude and to behavior do not always exist (Hernandez & Monroe, 2000).

Many studies confirmed that knowledge itself is not enough to change individuals' attitudes or even to motivate them to adopt a new behavior (Stern, 2000; Schultz, 2002), although the lack of knowledge may represent an obstacle for behavioral changes (DeYoung, 2000; Schultz, 2002). That means knowledge is not the only thing that affects individual environmental awareness, but there is also a combination of awareness, attitudes and values; social, cultural and psychological. Newhouse (1990) confirmed also that the lack of knowledge about a certain aspect of life may be considered as a barrier for attitude change. Only attitudes, which are derived from life experiences and education, can affect behavior. (Oweini and Houri, 2006).

Environmental Attitude, Environmental Behavior and Environmental Education

The educational and ecological literature contains various approaches in defining environmental attitudes. These approaches consist of attitudes, psychosocial variables, personal responsibility, and locus of control (Hines, Hungerford & Tomera, 1986). Attitudes have been expressed as common feelings towards the environment, being concerned about specific environmental issues, and taking action to reform environmental problems. While personal responsibility expresses the individual's feeling of obligation toward the environment, locus of control stands for the individual's understanding of their ability to bring about environmental change through personal behavior (Peer et al., 2007). Therefore, the individual characteristics that change according to external factors will have little to no effect on the situation. Those that change according to internal factors will have a strong effect on the situation.

Internal locus of control describes people who believe in their ability to bring about change through personal procedures (Peyton & Miller 1980; Hungerford & Volk 1990). One of the critical goals in establishing environmental literacy is to support people in believing in their ability to contribute in solving environmental problems through personal behavior, either as individuals or as a part of a group (Peer, Goldman & Yavitz, 2007; Mondéjar-Jiménez, 2012). Consequently, environmental behavior can be defined as the action of an individual or group that promotes the sustainable use of natural resources (Sivek and Hungerford, 1989). Thus, students' attitudes affect their behavior, especially their choice of action and their decisions. For instance in schools, students who have high scientific knowledge tend to choose more appropriate decisions (Ugulu, Sahin, & Baslar, 2013). This means there is a direct relationship between environmental education and environmentally responsible attitudes and behaviors (Vlaardingerbroek and Taylor 2007).

Certain previous studies pointed out the correlation between cognitive and affective attributes is weak and non-linear (Myers, Boyes, & Stanisstreet, 2004). They also suggested that knowledge is not enough to change attitudes and adopt responsible behavior. On the other hand, many researchers found significant effects of environmental education on students' attitudes. (Bradley & Walickzek, 1999; Pooley & O'Connor, 2000; Sama, 2003; Maki, Abddel-Khalick, & Boujaoude, 2003; Yılmaz, Boone, & Anderson, 2004; Alp, 2005; Koses, Gezer, Eroll, & Bilen, 2006; Uzun & Saglam, 2006; Fernández-Manzanal, et al., 2007; Aslan & Cansaran, 2008; Ozsoy, 2012). Some research indicates that attitudes can be a predictor of environmental behavior (Bamberg & Moser, 2000; Chewla, 2006; Sivek, 1988).

Various researchers found significant differences between male and female attitudes towards environmental problems and behavior towards the environment. Females had higher pro-environmental attitudes than males (Kuitunen & Tynys, 2000; Talay, Gunduz, & Akpinar,

2003; Sherkat and Ellison, 2007; Fernández-Manzanal et al., 2007; Torgler, García-Valiñas, & Macintyre, 2008; Ek, et al., 2009; Kose et al., 2011; Ozsoy, 2012).

Methodology

Purpose of the Study

Understanding and consciousness about environmental issues seem to be of particular importance in examining university students' attitudes and behaviors towards the environment, given the importance of a strong positive attitude towards the environment related to environmental behavior. Therefore, the purpose of this study is to explore undergraduate students' attitudes and behaviors toward the environment. The research questions to be addressed in this study are as follows:

1. What are undergraduate students' attitudes and behaviors towards the environment in Ajman University?
2. Are there any differences among undergraduate students' attitudes and behaviors in Ajman University towards the environment regarding their gender?
3. Are there any differences among undergraduate students' attitudes and behaviors in Ajman University towards the environment regarding their colleges?
4. Are there any differences between attitudes and behavior of undergraduate students enrolled in environmental sciences course and others who did not yet study environmental sciences course?
5. What are the students' evaluation of the course materials and their suggestions to improve it?

Importance of the Study

Ajman University of Science and Technology (AUST) has integrated an environmental sciences course as a required course. This study is important because it investigated factors that affect students to adopt positive attitudes and responsible behaviors towards their environment. Additionally, this study may help in developing course material and activities, as well as provide suggestions to protect the environment and explore solutions to environmental problems.

Methods

Participants

The sample was taken from undergraduate students enrolled in environmental sciences classes in the first semester for the academic year of 2014/2015 (Table 1). It consisted of (375) students; 230 females (61.3%) and 145 males (38.7%). The sample included students with literacy or science backgrounds. The students with a literacy background were 180 students (49.4%) from Law, Information Technology, Mass Communication and Humanities colleges. The students with a science background were 140 students (37.3%) from Engineering and 50 students (13.3%) from Dentistry and Pharmacy. All participants attended Ajman University in UAE, Participants were volunteers in this study.

Table 1. Profile of participants

College	Female	Male	Total	Ratio %
Law & Information, Mass communication and Humanities	110	75	185	49.4%
Engineering	90	50	140	37.3%
Dentistry& pharmacy	30	20	50	13.3%
Total	230	145	375	
Ratio	61.3%	38.7 %	100%	

Instruments

The Attitudes and Behavior Scale Towards the Environment (ABSTE). ABSTE was designed to determine students' attitudes and behavior towards the environment. The scale consists of (30) items put in two groups on a 5-point Likert scale that ranged from 1 (strongly agree) to 5 (strongly disagree). The two main factors of the scale were (a) Students' Attitudes towards the Environment (SATE). (15 items) (b) Students' Responsible Behavior towards the Environment (SRBTE). (15 items).

Environmental sciences course evaluation questionnaire. This questionnaire was designed to evaluate students' opinions towards the environmental sciences course, it consisted of 10 items with a 5 point Likert scale, that ranged from 1 (strongly agree) to 5 (strongly disagree), and one open question about their suggestions to improve the environmental sciences course.

Validation and Reliability of ABSTE. ABSTE was designed and tested for validity and reliability.

Validity. The attitudes and behavior scale towards the environment originally consisted of 38 items. It was subjected to content validity by submitting it to experts in psychology and experts in measurement and evaluation for their input and necessary corrections. According to their comments some items were deleted and some items have been modified, therefore the instrument ultimately included 30 items.

Internal consistency validity was determined by applying ABSTE to another sample consisting of 40 students and calculating Pearson r between every item of the scale and the total score of the scale, the correlation coefficients ranged between 0.59 and 0.77. Pearson r was calculated between every item and the total of its factor. The correlation coefficients ranged between 0.67 and 0.89. All correlation coefficients were significant, which confirmed the validity of the scale.

Reliability. The ABSTE was subjected to Cronbach's alpha reliability measure in the present study. Student's attitudes towards the environment (SATE) were 0.77, Student's responsible behavior towards the environment (SRBTE) was 0.75, and the total of (ABSTE) was 0.78. These are satisfactory reliability coefficients.

Results

Table 2. Mean, Standard Deviation and Relative Weight for ABSTE

	Highest points	mean	SD	RW	order
Factor 1	75	55.8	6.94	77.39	1
Factor 2	75	49.65	8.15	66.34	2
Total scale	150	105.6	11.37	71.87	

Table 3. Means, Standard Deviations and Relative Weight of the Sample Respondents' scores of ABSTE

N	ITEM	Mean	SD	Rel. Weight	Desc. Order
	-Factor (1): Student's Attitudes towards the environment (SATE).				
5	Awareness of environmental problems contributes to countries' development.	4.42	0.75	88.49	1
3	Environmental problems have to be discussed in all the countries.	4.40	0.70	88.00	2
13	Media must have role in spreading environmental awareness.	4.29	0.69	85.85	3
1	I concerned about problems affecting the current environment in the world	4.21	0.67	84.29	4
2	There are a little to be done about current environmental problems	3.98	0.71	79.61	5
14	I think that is essential to raise the awareness about the dangerous of environmental problem among all citizens	3.90	0.69	79.10	6
15	I think the recycling bins around the country are valuable.	3.87	0.88	77.46	7
12	I appreciate the efforts made to preserve and protect the environment	3.85	0.99	77.20	8
7	Environmental problems in the UAE is not critical	3.80	0.94	76.00	9
8	Seminars and workshops regarding development of environmental awareness are useful	3.50	1.06	75.33	10
6	It's useless to warn people about environmental problems	3.34	1.07	73.24	11
9	I enjoy reading books and magazines on environmental issues	3.12	1.06	72.10	12
10	Knowledge about environmental problems is not my specialty.	3.10	1.01	69.91	13

4	The so-called ecological crisis facing humankind has been greatly exaggerated	2.99	1.14	68.10	14
11	I am bored by news related to environmental issues	2.97	1.10	66.23	15
	Total score of factor (1)	3.72	1.65	77.39	
	- Factor (2): Student's Responsible Behavior towards the environment (SRBE)				
1	For saving energy, I turn off the light in my house when it is not used.	4.43	0.65	88.78	1
2	I willingly join activities to help save the environment.	4.36	0.70	88.00	2
6	I don't consume long time while I'm showering	4.21	0.79	86.24	3
7	I don't waste much water while I'm brushing my teeth	4.17	0.79	84.78	4
15	I've always reused the white paper in old notebook.	3.59	0.86	77.86	5
11	I always put any old stuff (clothes, shoes...etc.) in recycling bins.	3.55	0.89	73.11	6
8	I buy only as much as needed while I'm shopping	3.41	1.03	71.02	7
5	I always watch T.V program about environmental problems.	3.38	0.91	68.50	8
4	I always talk with people around me about environmental matters.	3.34	0.96	67.57	9
13	I share links relevant environment and environmental awareness on social networks (Facebook / Twitter, Linked in,...)	3.01	1.12	66.72	10
3	I avoid buying products in aerosol containers	2.91	1.14	52.39	11
14	I read labels on products to see if the contents are environmentally safe	2.40	1.03	47.34	12
10	I feel happy when I see people recycle used bottles, cans and papers	2.39	1.00	43.56	13
12	My friends know me as sensible person towards environment	2.30	1.34	40.25	14
9	I prefer using environmental harmless products	2.24	1.42	38.93	15
	Total score of factor (2)	3.31	1.74	66.34	
	Total of the scale	3.52	1.15	71.87	

To answer the questions and investigate the attitudes and behavior of undergraduate students enrolled in the environmental sciences course towards the environment, we considered a rank of 3.0 as the midpoint, which meant the item indicated positive if scored 3.0 or above.

As seen in Table 2, the undergraduate students indicated somewhat positive attitudes and behaviors toward the environment in the total scale; the total mean of the scale was 3.52 with SD 1.15 and RW 71.87. For factor 1 students' attitudes towards the environment total mean

was 3.72 with SD 1.65 RW 77.39. For factor 2, Students' Environmentally Responsible Behavior (SERB), the total mean of the scale was 3.31 with SD 1.75 and RW 66.34.

Factor 1: Student's Attitudes towards the Environment

As seen in Table 3, students scored the three relatively highest in the following items: five, $M = 4.42$, which was "Awareness of environmental problems contributing to countries' development" then item three, $M = 4.40$, which was "Environmental problems have to be discussed in all the countries" then item thirteen, $M = 4.29$, which was "Media must have a role in spreading environmental awareness." In these items, students showed their understanding about the importance of environmental awareness and its effect on countries' development and how as a result, students thought it essential to discuss environmental problems among all countries together, not separately. They understood very well the important role of media in spreading awareness about the environment. The lowest item was item four, $M = 2.96$, which was "I am bored by news related to environmental issues."

Factor 2: Student's Responsible Behavior towards the Environment

We can see that students scored the following three items relatively higher in item one, $M = 4.43$, "For saving energy, I turn off the light in my house when it is not used", then item two, $M = 4.36$, "I willingly join activities to help in saving the environment" then item six, $M = 4.2$ "I don't consume long time while I'm showering." In these items students translate their environmental awareness to many practical reactions and responsible environmental behaviors for saving environmental resources like water and energy. The lowest item was item nine, "I prefer using environmental harmless products" $M = 2.24$.

Table 5: Descriptive statistics of the sample

		N	M	SD
Gender	Female	230	83.95	18.20
	Male	145	49.57	14.25
College type	Law, Information Technology, Mass Communication and Humanities	185	73.12	23.18
	Engineering	140	54.05	18.01
	Dentistry and Pharmacy	50	83.39	8.98

In order to investigate if there were any difference in students' attitudes and behaviors towards the environment according to their gender or college, a two-way Analysis of Variance (ANOVA) was conducted on the ABTES.

Table 6: Results of two-way ANOVA on the ABTE scale

Source	Df	Means square	F	P
Gender	1	26469.112	147.208	0.000
college type	2	9205.579	50.835	0.000
College* gender	2	9967.041	56.412	0.000
Error	370			
Corrected total	373			

According to Table 6 there is a significant mean difference between females and males in their attitudes and behaviors toward the environment. It was found that females have higher positive attitudes and behaviors towards the environment than males. Additionally, regarding the main effect of students' college, a statistically significant mean difference was found among Law and Information Technology, Mass Communication and Humanities colleges, compared to Dentistry and Pharmacy and Engineering colleges on the ABTE scale, $F = 50.835$, $p = 0.000$.

The Scheffé post hoc tests were conducted to determine the mean score differences between groups. The comparison of mean scores according to the college type indicates that Dentistry and Pharmacy students expressed more positive attitudes and behaviors toward the environment than both Law and Information Technology, Mass Communication and Humanities colleges and the Engineering College. However, Law and Information Technology, Mass Communication and Humanities students showed more positive attitudes and behaviors than engineering students. The results also show that females in Law and Information Technology, Mass Communication and Humanities have the highest score in the ABSTE than other colleges, while males in Dentistry and Pharmacy have highest score in the ABSTE.

In order to investigate if there are any differences in attitudes and behaviors towards the environment between undergraduate students enrolled in the environmental sciences course and others who did not study the course yet, a group of 120 students (32%) has been taken from the main sample (375), and another group with 120 students (32%) who did not yet study the environmental course was taken randomly. A t-test was determined for independent samples for the two groups.

Table 7. Difference between students enrolled in the environmental course and others who are not studying the course yet

	N	M	SD	Df	T	P
Group 1	120	113.7	6.78	238	28.12	0.001
Group 2	120	84.3	9.23			

As shown in Table 7 there is a significant mean difference in the attitudes and behaviors towards the environment between Group 1 (undergraduate students enrolled in the environmental sciences course) and Group 2 (students who did not study the course yet) in their attitudes and behaviors towards the environment for Group 1, $t(238) = 28.12$, $p = 0.001$.

Student Evaluations of the Environmental Course

In order to investigate the students' evaluation of the course materials and their suggestions to improve the course, the environmental sciences course evaluation questionnaire was applied. As shown in Table 8 students indicated somewhat positive attitudes towards the environmental course. The total mean was $M = 3.27$ with $SD = 2.09$ and $RW = 73.06$. Regarding the open question about students' suggestions to improve the course, they proposed many suggestions:

1. Environmental sciences classes should not exceed 30-40 students. That gives students chances to be more involved in class activities (discussion, presentation, projects).
2. Environmental sciences course material should be updated and focused on some current critical environmental problems that affect humankind like climate change and nuclear problems and should mention some practical solutions that students can do to share in saving the environment.
3. Environmental course materials contained much information, so they should be divided into two parts: information to know and information for the exam.
4. Environmental course materials should be presented in an interesting way with more practical and interactive work.
5. Environmental sciences courses must have practical activities to make students more involved in environmental issues such as:
 - Trips to (planetarium, Masdar city, desalination factories, groundwater wells, solar power plants)
 - Visits to organizations working in the environmental field (Abu Dhabi Authority for Environment, Ministry of Environment, etc.)
 - Invite organizations working in environmental industries to hold some activities in Ajman University such as workshops, seminars, training, lectures and competitions to make students more caring and aware of their environment.

Table 8. Mean, standard deviations and relative weight of respondents' scores on the environmental sciences course evaluation questionnaire

N	Item	M	SD	RW	order
1	Environmental sciences course is somewhat difficult.	3.56	1.72	73.21	5
2	If the environmental courses was not required course, I think will choose it to study.	2.61	1.46	66.11	8
3	Environmental sciences course is an important course for students in science major (medicine - pharmacy)	2.43	0.99	65.53	9
4	Environmental sciences course provide very important information about environmental issues.	3.93	0.98	85.46	1
5	Environmental sciences course is only necessary for passing examination.	2.41	1.33	64.38	10
6	After studying environmental sciences course ,I feel responsibility towards the environment	3.82	1.31	79.45	3
7	Environmental sciences course made me think to find solutions for environmental problems	3.78	1.47	75.17	4
8	The course content successfully covered all environmental issues in very simple way.	2.98	1.12	68.62	7
9	Environmental sciences course need more practical activities	3.87	1.03	83.22	2
10	Feeling satisfied of studying Environmental sciences course	3.33	0.89	69.44	6
		3.27	2.09	73.06	

Discussion

According to the descriptive results of this study, it has been observed that there were significant differences in the environmental attitudes and environmental behaviors between the undergraduate students enrolled in the environmental sciences course and undergraduate students that did not study the course. The students enrolled in the environmental sciences course indicated positive environmental attitudes and environmental behavior. However, the total scale score and item scores were clustered just above the mid-point.

These findings support previous studies which observed that students who had environmental education were more aware of environmental attitudes than other students (Bradley et al., 1999; Thapa, 1999; Pooley & O'Connor, 2000; Talay et al., 2003; Sama, 2003; Maki et al., 2003; Yilmaz, et al., 2004; Alp, 2005; Erol & Gezer, 2006; Uzun & Saglam, 2006; Fernández-Manzanal et al., 2007; Aslan & Cansaran, 2008; Ozsoy, 2012). The results also agree with other studies that found significant effects of environmental education on students' environmental behaviors (Bamberg & Moser, 2000; Chewla, 2006; Sivek, 1988). Otherwise, it disagrees with some previous studies that found environmental education does not affect students' environmental attitudes and environmental behavior (Kahraman, Yalcin, Ozkan, & Aggul, 2008; Ozdemir, Yıldız, Ocaktan, & Sarısen, 2004; Müderrisoğlu & Altanlar, 2011).

Concerning factor one of the scale related to students' attitudes towards the environment, the items that scored the three relatively highest were: "Awareness of environmental problems contributes to countries' development," "Environmental problems have to be discussed in all the countries," and "Media must have role in spreading environmental awareness." These three items reflect the students' consciousness and understanding, the importance of environmental awareness and its effect on countries' development, and how the ecological crisis is threatening humankind through environmental problems. The results show how the students understand the role of media in spreading environmental awareness. They are keen to know and care about the environment which indicates students' positive attitudes towards the environment. The lowest item was "I am bored by news related to environmental issues." The students did not seem to mind reading news about the environment.

Concerning factor two of the scale related to students' responsible behavior towards the environment, students scoring the three relatively highest were: "For saving energy, I turn off the light in my house when it is not used," "I willingly join activities to help in saving the environment," "I don't consume long time while I'm showering." In these items students translate their environmental awareness and environmental attitudes in many practical reactions like saving environmental recourses (water and energy). This asserts the positive effect of environmental awareness and attitudes on responsible behavior towards the environment. The lowest item was, "I prefer using environmentally harmless products." This finding might be logical because the harmless product is somewhat expensive for them as they are still students.

Overall, it is clear that students have background knowledge about the environment, which is translated to their attitudes and behaviors towards the environment. Although there are many factors that could affect their attitudes and behaviors, environmental education could be one of the most important factors that affect their attitudes and behaviors towards the environment. The significant difference between students enrolled in the environmental sciences course and others who did not study it yet, confirmed the importance of environmental education that is reflected in students' environmental attitudes and behaviors. Therefore, it is a good sign that Ajman University of Science and Technology (AUST) has integrated an environmental sciences course as a required course.

As Ozmen et al., (2005) and Ek et al. (2009) showed, an environmental course should be included in university education as well as primary and secondary education. For future implications, the content and delivery of the environmental course might be restructured to obtain more interests of university students from a wide range colleges and different backgrounds in handling environmental issues and improving their environmental attitudes and behaviors.

The two way ANOVA results revealed significant differences in the perceptions of male and female students' attitudes and behaviors towards the environment. Female students expressed more positive attitudes and behaviors towards the environment than males. This finding is consistent with many other studies (Kuitunen and Tynys, 2000; Talay et al, 2003; Sherkat and Ellison, 2007; Fernández-Manzanal et al., 2007; Torgler et al., 2008; Ek & Kılıç et al., 2009; Kose et al., 2011; Ozsoy, 2012). As Jenkins and Pell (2006) found, females show a high degree of social responsibility and make a significant contribution to environmental protection.

These findings indicated that there are differences among the mean scores of students based on their colleges on the Attitude and Behavior Scale towards the Environment. The comparison of mean scores according to their colleges indicated that male students from Dentistry and Pharmacy colleges displayed more positive attitudes and behaviors towards environment than

Law and Information Technology, Mass Communication and Humanities and Engineering colleges. On the other hand female students from Law and Information Technology, Mass Communication and Humanities expressed more positive attitudes and behavior towards the environment than Dentistry and Pharmacy and Engineering colleges. Differences among colleges may reflect that some students may have learned or read about the environment for the first time. Consequently, they might be more interested in environmental issues which are reflected in their positive attitudes than students who had previously taken course work on environmental studies.

Findings regarding the evaluation of the environmental course showed positive attitudes towards course materials, which was clear in the choices for the three highest items: “Environmental sciences course provides very important information about environmental issues,” “Environmental sciences course needs more practical activities” and “After studying the environmental sciences course, I feel responsibility towards the environment.” These items reflected students’ understanding of the importance of environmental sciences information in their life. The results also showed their interaction with course material that made them think and decide that the course needed more practical activities. In addition the students considered that the course information had a positive impact on them because it made them feel responsible towards the environment. Also students were very keen to share positive suggestions to improve the course.

Conclusion

Environmental problems have emerged as a serious issue in the world today and educating people is the main way to reduce environmental problems by raising awareness and responsiveness towards the environment. Environmental education has an effective impact on students’ environmental attitudes and behaviors. It is an essential way to reduce environmental problems that are due to lack of environmental legislation all over the globe. Education is a long-life process, so it is crucial to teach about the environment at all educational stages beginning from pre-school and continuing to university education. University students of the present will be the leaders of the future. Some of them may be engineers in large factories or administrative staff in private and public places in the future, or as direct policy makers who can apply pressure for diminishing environmental problems. Therefore, universities should offer an environmental education program covering environmental sciences for all programs and colleges in order to improve the awareness and consciousness of students towards environment.

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Appendix A

Attitudes and Behavior Scale towards the Environment (ABSTE)

Dear Students,

This questionnaire discusses some items about the environment and our relation with it. It consists of 30 items. Write your personal information, then read carefully every item and choose only one option out of five (strongly agree- agree-not sure-disagree-strongly disagree). We ensure you full confidentiality and will only use for scientific research purpose.

Name :

Gender :

College :

Midterm mark :

Class :

Age :

	ITEM	Strongly agree	agree	Not sure	disagree	Strongly disagree
1	I concerned about problems affecting the current environment in the world					
2	For saving energy, I turn off the light in my house when it is not used.					
3	There are a little to be done about current environmental problems.					
4	Environmental problems have to be discussed in all the countries.					
5	I willingly join activities to help save the environment.					
6	I avoid buying products in aerosol containers					
7	The so-called ecological crisis facing humankind has been greatly exaggerated					
8	I always talk with people around me about environmental matters.					
9	Awareness of environmental problems contributes to countries' development.					
10	I always watch T.V program about environmental problems.					
11	I don't consume long time while I'm showering					
12	I don't waste much water while I'm brushing my teeth					
13	It's useless to warn people about environmental problems					
14	I think the recycling bins around the country are valuable.					
15	Environmental problems in the UAE is not critical.					
16	I buy only as much as needed while I'm shopping					
17	Seminars and workshops regarding development of environmental awareness are useful					
18	I enjoy reading books and magazines on environmental issues					

19	I prefer using environmental harmless products					
20	Knowledge about environmental problems is not my specialty.					
21	I feel happy when I see people recycle used bottles, cans and papers.					
22	I am bored by news related to environmental issues					
23	I appreciate the efforts made to preserve and protect the environment					
24	Media must have a role in spreading environmental awareness.					
25	I always put any old stuff (clothes, shoes...etc.) in recycling bins.					
26	My friends know me as a sensible person towards the environment					
27	I share links relevant to the environment and environmental awareness on social networks (Facebook / twitter ,...)					
28	I read labels on products to see if the contents are environmentally safe					
29	I think that it is essential to raise the awareness about the dangers of environmental problems among all citizens					
30	I've always reused the white paper in my old notebook.					

Thank you for your cooperation



**Understanding Student Attitudes about Distance Education:
The Importance of Excitement and Fear**

Esther Smidt, Jennifer Bunk, Rui Li, Ashley McAndrew, and Matthew Florence

Abstract

This quantitative study investigated student attitudes toward distance education at a midsized, mid-Atlantic state university in the United States. The research question was: Do feelings of excitement and fear moderate and/or mediate the relationship between online learning experiences and student opinions about the current state of online education, namely that institutions were pushing too much instruction online? Data was collected from students via an online survey. Findings suggested: (a) students with online experience who were fearful of this learning mode were the most likely to report that their institutions were pushing too much online learning, (b) regardless of online learning experience, students who were excited about this learning mode were less likely to think that their institutions were pushing too much online learning.

Keywords: student attitudes; distance education; excitement; fear

Introduction

Distance education has grown exponentially in the last few decades. Between fall 2012 and 2013, online student enrollment grew by 5.2%, growing at a higher rate than overall student enrollment (Lokken & Mullins, 2014). In view of this growth, it is important to investigate the attitudes, perceptions, experiences, and learning outcomes of students, to see how they can inform the implementation of distance education. This study sought to understand student attitudes by looking at the psychological processes, specifically the emotions of excitement and fear and their influence on students' online learning experience. As such, this study aimed to contribute theoretically by adding to the existing body of knowledge, particularly in the area of emotion and online learning, and practically, by considering the influence of excitement and fear on students' online learning experiences.

Literature Review

Students' Online Course Experiences

As indicated above, the collegiate mode of learning is rapidly changing, and more and more students are taking online courses during their undergraduate and graduate careers. The online course experiences and face-to-face experiences of students vary from institution to institution. Research suggests that student performance in online courses is at least as good as, if not better than those in face-to-face courses (Lapsley, Kulik, Moody, & Arbaugh, 2008; Reisetter, Lapointe, & Korcuska, 2007; Sitzmann, Kraiger, Stewart, & Wisher, 2006; Warren & Holloman, 2005). In a study conducted by Ernst (2008), a large percentage of respondents, 85%, were at ease in an online learning environment. Similarly, students in online and traditional classes did not differ in terms of their attitudes about and feelings of self-efficacy toward technology. Students in both types of courses had relatively positive attitudes regarding technology and felt moderately self-efficacious about using technology (Stevens & Switzer, 2006).

Factors that Adversely Impact Student Emotions

An online course experience can negatively impact a student's emotions about the course for a variety of reasons. Inexperience creates the biggest obstacle. Understanding Internet culture is an important factor when it comes to finding ease in utilizing the Internet in an online course. Furthermore, lack of experience leads to lack of confidence, which results in a fear of using certain functions on the part of students (Carswell, Thomas, Patre, Price, & Richards, 2000). Other sources of anxiety for most students include lack of experience participating in online courses, not being accustomed to the electronic environment, and not possessing control over the systems processes (O'Regan, 2003).

The second factor that negatively impacts a student's distance education experience is the relationship with the instructor in the online environment. In online courses, students may experience confusion if instructor feedback is not clear or timely, which leads to anxiety (Hara & Kling, 1999). For instance, if instructors fail to reply to questions in a timely manner, this leads to an increase in anxiety, especially when there is an issue with an assignment close to the assignment's deadline (O'Regan, 2003). These experiences could ultimately result in students dropping out of online courses (Ivankova & Stick, 2007).

The third factor that is found to create anxiety and dissatisfaction in the online classroom is the mode of communication. Many students reported that they felt lost in the multi-threaded discussion environment. They became confused and frustrated, having difficulty determining

“who” was talking to “whom” about “what.” Generally, students tended to “withdraw” or “just observe.” These reactions would create a negative impact on online communications, such as creating “discontinued” feelings and interfered with students’ ability to think and reflect on the messages (Tu & McIsaac, 2002).

Factors that Positively Impact Student Emotions

On the other hand, positive experiences in the distance education setting can create a welcome environment, which can lead to higher levels of satisfaction regarding their course. The biggest factor contributing towards a positive online learning experience has to do with the instructor. An instructor has a definite role in making the online environment successful (Ali & Ahmad, 2011). Interaction is different in this environment (Walker & Hackman, 1991), with its emphasis on the instructor’s role as the mediator between student and materials (Beaudoin, 1990) or between student and technology (Hillman, Willis, & Gunawardena, 1994). Therefore, the instructor must be cognizant of the increased diversity of learners, and then accordingly determine test formats, measurement practices, and assessment strategies (Banerjee & Brinckerhoff, 2002). Doing so may persuade and motivate students to accept the e-learning environment (Selim, 2005).

The instructor must also be available to the student, for example, by quickly replying to questions through email. Even if the responses are not solutions, showing that the problem is being worked on is helpful (Carswell, et. al., 2000). According to Inman, Kerwin, & Mayes (as cited in Ali & Ahmad, 2011), students expect three things from an instructor in the distance learning environment: helpful materials for interacting with the distance learning medium, some on-campus sessions, and availability in the time of need. In online learning environments, obtaining student feedback about needs and preferences is crucial for the successful design and implementation of this environment (Sahin, 2007). E-learning environments demand a transition of the roles of students and instructor. The instructor’s role is to become a facilitator who stimulates, guides, and challenges his/her students by providing students with freedom and responsibility, rather than that of a lecturer focusing on the delivery of instruction (Huynh, 2005). Learner satisfaction is felt when there is a perceived learner-instructor interaction taking place in the virtual classroom (Abdous, 2010).

Another factor that contributes towards the positive emotions of online learners is tailoring instruction to students’ learning styles. Findings suggest that online education can be a superior mode of instruction if it is targeted to learners with specific learning styles (e.g., visual and read/write learning styles) and with timely, helpful instructor feedback of various types. Although cognitive and diagnostic feedbacks are important factors that improve perceived learning outcomes, metacognitive feedback can induce students to become self-regulated learners (Eom, Ashill, & Wen, 2006).

Yet another aspect that facilitates a positive emotional experience by online learners is technological support and training. There is a need to educate students on technologies and other tools used in order to minimize communication breakdown. Distance education students must understand how Internet connections work in order to avoid issues with bandwidth, dropped connections, and other factors that impede communication (McDyre, McAndrew, & Smidt, 2015). Adequate technical training in student success and learning is important (Holder, 2007); however, not all Internet-delivered courses assess students’ computer skills prior to enrollment or provide technology and computer skill training during the course. Many university instructors assume traditional college students are “computer literate” and “technology savvy.” However, recent research has appeared questioning the computer skills

and technology knowledge of K-16 students (Koroghlanian & Brinkerhoff, 2007). A task analysis of each Internet-delivered course should be undertaken to determine the technical skills needed in the course. These skills should be specified, and tutorials, handouts or self-study guides concerning the technical skills needed should be provided to students prior to the start of the course (Koroghlanian & Brinkerhoff, 2007). Institutions offering Internet-delivered courses through course management systems such as WebCT, Desire2Learn, or Blackboard should provide scaffolds addressing shortcomings in the Help and other documentation incorporated into these systems based on the frequency of questions posed by students at those institutions (Koroghlanian & Brinkerhoff, 2007).

Excitement and Fear

Following from the research above, there is reason to believe that excitement and fear are relevant emotions when considering how experience with online courses relates to student reactions to online learning. For example, lack of experience with Internet culture can be associated with decreased confidence and increased fear of technology (Carswell et al., 2000; O'Reagan, 2003). In addition, experience with online courses can result in fear when students get confused about feedback (Hara & Kling, 1999) or uneasy about the multi-threaded nature of online discussion (Tu & McIsaac, 2002). Also, several research studies cited above indicated that when instructors are responsive, providing timely feedback and tech support, students can respond positively and with excitement (e.g., Ali & Ahmad, 2001; Koroghlanian & Brinkerhoff, 2007).

There are also theoretical reasons to explore excitement and fear. From a theoretical standpoint, the study of discrete emotions dates back to mid-1980. Several theorists have categorized emotions and linked them with core cognitive processes. (See Roseman & Smith, 2001 for an overview such approaches.) Smith and Lazarus (Lazarus, 1991; 2001; Smith & Lazarus, 1990), for example, define fear as a core negative emotion that indicates an inability to cope emotionally with a stimulus. Izard (2013) defines excitement as a fundamental human emotion that is characterized by interest in what is new or possible. Thus, by investigating these two core emotions, one negative and one positive, we can further understand the cognition associated with them and ultimately get a glimpse into why students may be reacting the way they are.

Institutional Pressure for Online Courses

There has been some research focusing on the institutional pressure brought to bear on faculty to teach online (Baran, Correia, & Thompson, 2011; Kang, 2012; Redmond, 2011). Grant (2004), for example, investigated factors that contributed to teacher education faculty's decision to pursue professional development in distance education technologies. Factors mentioned by Grant included extrinsic factors, namely external pressures from department and university administration for faculty to teach online. It should be noted, however, that the pressure was "moderate (but not overwhelming)" (p. 335), which contrasted with Lesht & Windes' (2011) finding that "some felt excessive pressure" to teach online. Meanwhile, Bower (2001) stated that "[m]ost faculty ... have not responded as quickly and enthusiastically as administrators would like" (para. 2). Furthermore, while Betts (1998) found that 25% of surveyed faculty experienced institutional pressure to teach online, Vernon, Vakalahi, Pierce, Pittman-Munke, and Adkins (2009) discovered that nearly 67% of social work faculty experienced the same pressure.

In contrast, in spite of anecdotal data suggesting that students experience a similar pressure to take online courses, for example, when there are no seats left in their preferred face-to-face

sections (Filimban, 2008), there has been a dearth of research focusing on students being forced to take online courses.

In view of this, our research question follows: Do feelings of excitement and fear moderate and/or mediate the relationship between online learning experiences and student opinions about the current state of online education, namely that institutions are pushing too much instruction online?

Method

Participants

Participants were 16,000 part- and full-time students from a mid-sized public university in the Mid-Atlantic region of the US who were invited via email to participate in an online survey on distance learning attitudes. Participation in the study was voluntary and participants were free to withdraw from the study at any time without penalty. A total of 1,453 students responded, yielding a 9.1% response rate. Data for 53 of the participants was discarded due to failure to complete at least half of the survey (final $N = 1400$). Participants consisted of 20% males and 80% females. 85% of the students who completed the survey reported their status as full-time and 67% of students in the sample completed 91 or more credits. 12% of respondents were graduate students and 88% were undergraduates. The breakdown of participants by the college of their major was as follows: 26.5% from the College of Arts and Science, 24.2% from the College of Business and Public Affairs, 18% from the College of Education, 25.3% from the College of Health Sciences and 2.5% from the College of Visual and Performing Arts and 3.6% undeclared. The mean age of the respondents was 23.06 ($SD = 6.9$) with a range of 17-67 years. The ethnic breakdown of the survey respondents was as follows: 3.4% Asian or Pacific Islander, 8.3% Black, African or African American, 3.4% Hispanic, 82.8% White or European and 2.1% Other.

Measures

Demographic Variables

The following variables were used: gender (0 = male; 1 = female), part-time/full-time status (0 = part-time; 1 = full-time), number of credits completed, and age (in years).

Online Course Experience

Participants were asked if they had taken any of the following types of courses during the most recent academic year: face-to-face, hybrid/blended, and online. Students who selected “online” were coded as “1” (having online course experience) and students who did not choose “online” were coded as “0” (not having online course experience). 22% of participants reported taking an online course during the most recent academic year.

Excitement/Fear

The survey included the prompt: “Do the following developments fill you more with excitement or with fear?” Response options included “more fear than excitement” or “more excitement than fear” and the responses were coded such that a higher score indicated more excitement than fear. The item we used in our analyses was “the growth of online education.” 50% of respondents endorsed “more fear than excitement” and 50% endorsed “more excitement than fear.”

Outcome

The survey included the prompt “What are your opinions about the current state of online education?” and the following item was used in analyses as our outcome: “[my institution] is pushing too much instruction online.” The item was rated on a 5-point Likert scale with *Strongly Disagree* (1) and *Strongly Agree* (5) as anchors and 16.7% of respondents endorsed agree/strongly agree, 30.4% endorsed neutral, and 52.8% endorsed disagree/strongly disagree.

Results

Correlation Analyses

To explore our research question, “Do feelings of excitement and fear moderate and/or mediate the relationship between online learning experience and student opinions about the current state of online education, namely that institutions are pushing too much instruction online?” we first ran a set of preliminary correlations which are reported in Table 1.

Table 1. Correlations among all study variables

Measure	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1 Part/Full-Time	.852	.355	--						
2 Number of credits	2.90	1.44	-.008	--					
3 Age	23.06	6.95	-.502*	.171*	--				
4 Gender	.798	.402	-.048	-.001	-.015	--			
5 Online course experience	.220	.413	-.181*	.111*	.197*	.007	--		
6 Excitement/fear	1.50	.500	-.101*	.043	.107*	-.011	.174**	--	
7 My institution is pushing too much instruction online	2.52	1.06	.042	-.034	-.007	-.056*	-.092*	-.364*	--

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

Pairwise $N = 1292-1400$

An inspection of the correlation table indicated that the following variables were significantly correlated with the extent to which students thought their institution was pushing too much instruction online: gender ($r = -.056$; $p < .05$), online course experience ($r = -.092$; $p < .001$) and excitement/fear ($r = -.364$; $p < .001$).

Moderation Analyses

Given that the preliminary correlation analyses revealed that gender, online course experience, and excitement/fear were all predictive of our outcome, we ran an exploratory moderation analyses to test for possible interactions among these three variables. Multiple regression analyses were performed using the method suggested by Baron and Kenny (1986). The following control variables were entered in the first step of the regression: part/full time, number of credits, and age. Next, the main effect variables (gender, online course experience, and excitement/fear) were added in step 2 of the regression. All two-way interaction terms were entered in step 3 and finally the three-way interaction (gender X experience X excitement/fear) was added in the fourth step. The results can be viewed in Table 2.

Table 2. Moderation Analysis

		Outcome: My institution is pushing too much instruction online		
Predictors		β	R^2	ΔR^2
Step 1				
Part/Full Time		.033		
# Credits		-.002		
Age		.057		
			.004	.004
Step 2				
Gender		-.003		
Online Teaching Experience		.219*		
Excitement/Fear		-.275***		
			.145	.141***
Step 3				
Gender X Online Teaching Experience		-.090		
Gender X Excitement/Fear		.081		
Online Teaching Experience X Excitement/Fear		-.339***		
			.155	.010**
Step 4				
Gender X Online Teaching Experience X Excitement/Fear		--		
			.155	.000

Note. Standardized regression coefficients from the best-fitting model are shown.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Listwise $N = 1234$

A significant change in R^2 at the third step (after adding the two-way interactions; ($\Delta R^2 = .01$, $p < .01$)) indicated that, as a group, the two-way interactions explained significant variance in outcome over and above the effects of the control and main effect variables. Inspection of the

standardized regression coefficients revealed that the two-way interaction between experience and excitement/fear ($\beta = -.339, p < .001$) was significant in predicting our outcome. The other two two-way interactions were not significant. This significant interaction is illustrated in Figure 1. As indicated by the figure, excitement/fear and online course experience interacted to predict the extent to which respondents felt that their institution was pushing too much online instruction. The relationship between experience and the outcome was positive for those who were fearful but negative for those who were excited. Those students who were the most likely to believe that their institution was pushing too much instruction online were those who had online course experience and were fearful about the growth of online education.

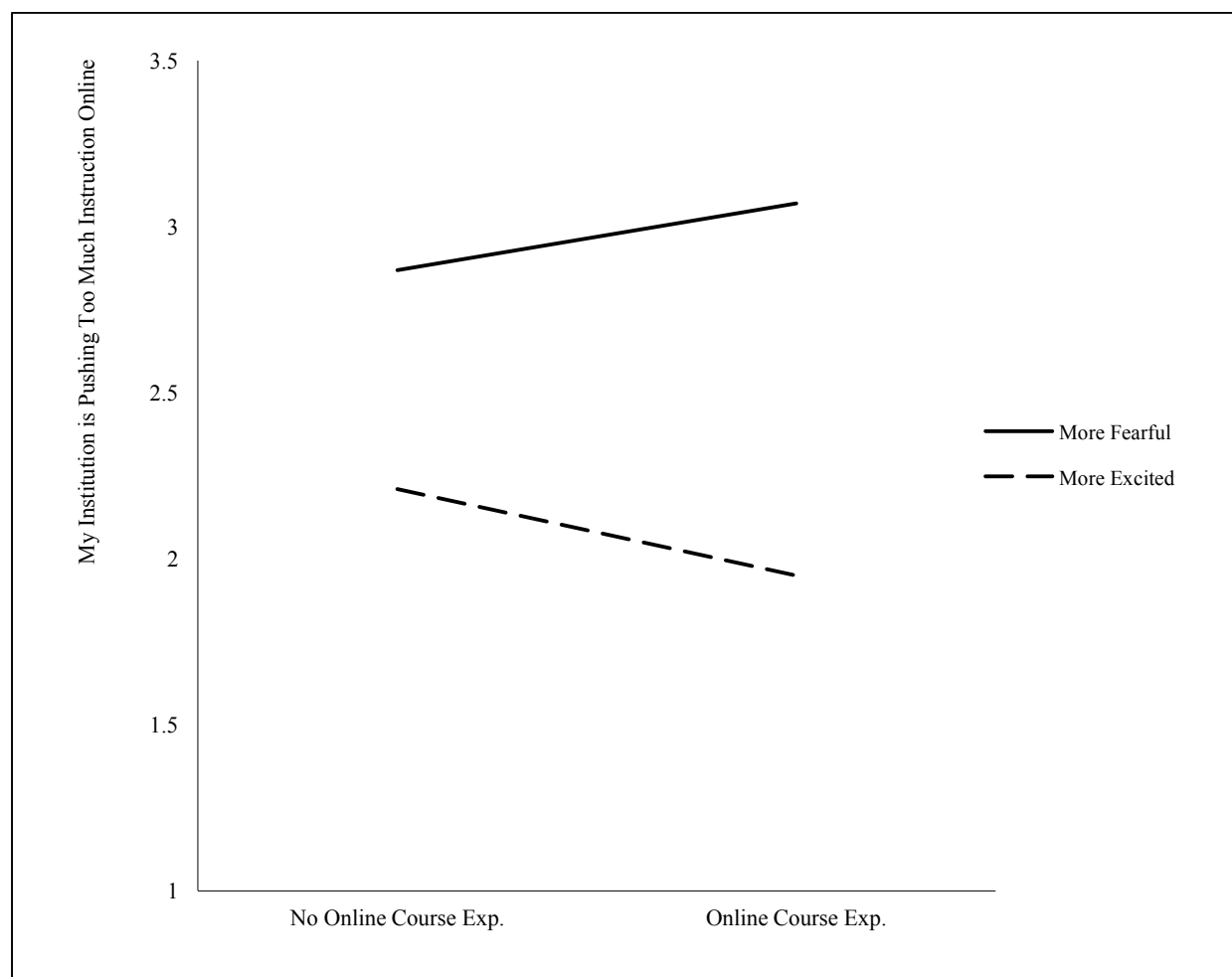


Figure 1. Excitement/fear and online course experience interaction to predict the extent to which respondents felt that their institution was pushing too much online instruction

Mediation Analyses

Given the strong correlation between fear/excitement and our outcome, and in an attempt to demonstrate the importance of fear/excitement over and above online course experience, we also tested whether feelings of excitement or fear mediated the relationship between online course experience and the extent to which students believed that their institution was pushing too much instruction online. Multiple regression analyses were conducted using the method suggested by Baron and Kenny (1986). The following variables were used as controls: gender, part/full time, number of credits, and age. The first step was to establish a connection between our predictor and outcome variable. In this instance our predictor was online course experience. We thus regressed our outcome onto online course experience and online course experience

was significant ($\beta = -.082$; $p < .01$). With the predictor showing a significant relationship, we proceeded to step 2 which consisted of showing the relationship between the predictor (online course experience) and the mediator (excitement/fear). For this step the mediator (excitement/fear) was regressed onto the predictor (online course experience) and it was significant ($\beta = .158$; $p < .001$). With the relationship between predictor and mediator established, the final step was to conduct a multiple regression with both online course experience and excitement/fear as predictors. To establish mediation, it was necessary to show that excitement/fear was significant in predicting our outcome and that once excitement/fear was added to the regression equation, the relationship between online course experience and the outcome weakened. To test this, the outcome was regressed onto online course experience and excitement/fear. The results showed that excitement/fear significantly predicted our outcome ($\beta = -.371$; $p < .001$). In addition, the relationship between experience and the outcome became non-significant ($\beta = -.025$; $p = .373$). Thus, the results indicated that excitement/fear mediated the relationship between online course experience and the extent to which student thought that our institution was pushing too much instruction online such that those students who had online course experience were more likely to be excited about the growth of online education and this excitement, in turn, was negatively related to believing that our institution was pushing too much instruction online.

Discussion

This study investigated students' attitudes by considering how emotion influenced their perceptions of their online learning experiences. More specifically, the research question asked "Do feelings of excitement and fear moderate and/or mediate the relationship between online learning experience and student opinions about the current state of online education, namely that institutions are pushing too much instruction online?"

Our moderation analyses demonstrated that the relationship between online course experiences and the extent to which students thought that our institution was pushing too much online instruction depended on fear/excitement. Specifically, this relationship was positive for those students who reported being more fearful than excited about the growth of online education and negative for those students who reported being more excited than fearful. Students who had online course experience and were fearful about the growth of online education were the most likely to think that our institution was pushing too much instruction online. This might be because they had already gained online course experience and might be pressured by the institution to take more online courses. Conversely, of the students who were excited about the growth of online education, students with online course experience were less likely to consider that our institution was pushing too much instruction online in comparison to students without online course experience. Furthermore, as a general group (without regard to online course experience), students who were fearful about the growth of online education were more likely to consider that our institution was pushing too much instruction online in comparison with students who were excited about the growth of online education. This was perhaps because being excited about online education predisposed students towards online education and they would not feel institutional pressure to take online courses.

In addition, our mediation analyses revealed that excitement/fear about the growth of online education mediated the relationship between online course experience and students' opinions that institutions were pushing too much instruction online. In other words, excitement/fear was a key explanatory variable in understanding why course experience was related to the tendency to think that one's institution was pushing too much instruction online. This finding has important practical value because emotions like excitement or fear can be modified but

students' past online course experience cannot. Administrators and faculty can, for example, help engender an excitement for online learning among all students, whether or not students have taken an online course. In addition, our findings also suggest that increased online course experiences may result in more excitement and a decreased sense of pressure to take online courses. However, further research is needed to confirm our findings and to better understand the relationship among online course experience, excitement/fear, and students' perception of the institutional pressure to take online courses

In other words (and as demonstrated in Figure 1), of the students who were fearful about the growth of online education, students with online course experience were more likely to consider that their institutions were pushing too much instruction online in comparison to students without online course experience. The former might feel so because they had already gained online course experience and might feel pressurized by the institution to take more online courses. Furthermore, as a general group (without regard to online course experience), students who were fearful about the growth of online education were more likely to consider that their institutions were pushing too much instruction online in comparison with students who were excited about the growth of online education, the latter perhaps because they were already predisposed towards online education and would not feel institutional pressure to take online courses. And finally, the magnitude of opinion about institutions pushing too much instruction online was greater between students with online course experience who were more fearful and more excited in comparison with the same two groups of students without online course experience.

Conclusion

Although our research begins to demonstrate how excitement/fear shapes student opinions about distance education, this study is not without its limitations. The standard limitations of single-source, correlational survey data certainly apply to this study – e.g., causal inferences cannot be made and common method bias may explain some of the relationships. In addition, although we were able to demonstrate that students who had online course experience and were fearful about the growth of online education were the most likely to think that their institution was pushing too much instruction online, there are other factors that can affect these negative opinions. For example, the exact nature of the online course experience (e.g., Was it an elective or required course? How much online teaching experience did the instructor have? What kinds of interactions did the students have with peers?) and other affective reactions (e.g., anger, cynicism) may play a role in these opinions. Future research should explore these and other factors in order to paint a more complete picture of why and how students are affected by distance education.

Future research should also delve deeper into some of our results. Qualitative data testing our assumption that excitement about online education predisposes students to feeling less pressure to take online courses would be fruitful. In addition, further research should explore the relationship between online course experience and student opinions. In what cases are more experience associated with positive vs. negative opinions? Lastly, given that our results revealed the key role that excitement/fear plays in shaping student opinions, further research should continue down this avenue to not only confirm our findings, but to also explore how institutional efforts to engender excitement might be associated with more positive opinions about online learning.

Distance education is rapidly growing and it is important to understand how students' emotions, particularly excitement and fear, can affect their perception of the online learning experience. Findings of this study suggested that when students were fearful of the growth of

online learning, they felt that their institution was pushing too much online instruction. However, we also found that excitement/fear played a key role in shaping students opinions about online education and that increasing excitement might help create a more positive climate among students with regards to their opinions about online learning.

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**Teacher's Influence Scale from their Colleagues and Principals: Its
Relation with School Performance in Public Schools of the
Albanian Educational System**

Valbona Nathanaili

Abstract

This article aims to evaluate the relation between school performance and the Teacher's Influence Scale on certain issues from their colleagues and principals in the public educational system of Albania. For this purpose, a questionnaire was used. The sample consisted of 428 teachers, teaching at 20 public schools in the pre-university educational system in Albania who filled in self-report questionnaires with six items. The schools were chosen based on performance criteria, with higher and lower performance based on the Educational Directory of each city: Tirana, Kamëz, Elbasan and Shkodra. One of the conclusions is that teacher's influence by their colleagues is very low, ($M=2.5197$), as is teacher's influence by their principals ($M=2.1789$); but teachers are slightly more influenced by their colleagues. The school performance, in the case of Albanian public schools, is related very weak with the scale of teachers' influence. However, this relation is slightly higher in schools with lower performance. Furthermore, the school performance is overall more than the collective efforts of teacher and principals and involves the background of the school community.

Keywords: teacher collaboration; reform; pupils' expectations; social relations

Introduction

The Educational System in Albania, during these last two decades, has undertaken a series of reforms. Most of them are related to the core of schooling, for example: curricula, textbooks, standardized tests, school leadership, and professional development. Professional development is related to the classification of a school based on school performance (IShA, 2014). School performance include: general data about the school, the percent of passed pupils on the State exams, average grade, the percent of dropouts, staff development, teacher results on the qualification tests, the percent of teachers/principals in professional networks, socio-economic environment and the scale of teacher satisfaction at school. During the scholastic year 2013-2014, for the first time in Albania, the schools are listed based on their performance; hence, school performance is becoming a very important concept. This new shift is an effort to evaluate the schools based on criteria. It creates an opportunity to see what happens inside the schools or to evaluate schools from the inside-out (Elmore, 2008) rather than *vice versa*.

According to data from the Educational Directory of each city, taken in consideration in this study, the schools with better performance are located at the center of cities, in communities with high socio-economic backgrounds, have parents with high expectations for their children and are able to help and support their children with home-duties or other responsibilities assigned by the school. According to PISA results of 2009 (OECD, 2010, p.13-14), “Home background influences educational success, and schooling often appears to reinforce its effects. Although poor performance in school does not automatically stem from a disadvantaged socio-economic background, the socio-economic background of students and schools does appear to have powerful influence on learning outcomes. In Albania, as well as in many other countries, students in urban schools perform better than students in rural schools.”

The same must be said for the teachers: the teachers of schools with better performance usually have more training or more qualifications, including the right diploma. Teacher results of these schools, in qualification exams of the last 3 years are better. PISA results of 2009 (OECD, 2010) confirm this fact. In Albania, the correlation between the socio-economic background of schools and the percentage of teachers with university-level (ISCED 5A) among all full-time teachers is 0.38. Additionally, it is of note that the Educational System in Albania is very poor in granting teacher rewards or other bonuses for high performance. The socio-economic background of students and teacher performance influences student outcomes. This inquiry focuses on certain teacher attributes. The question is, “How much public school performance, in a selection of Albanian districts, is related to the influence between teachers or from the principal on school performance?”

Literature Review

Studies regarding the teaching profession has shifted from isolation to collaboration and influence (Elmore, 2008; Payne, 2011). For the Consortium on Chicago Schools Research (Payne, 2011), one of the five fundamentals ways for improving school systems is professional capacity, including the capacity of teachers to talk about their teaching with one another and the degree to which the adults in a building take collective responsibility for what happens there. For Dewey (2007), as the most mature member of the group, the teacher has a peculiar responsibility for the conduct of the interactions and communications which are the very life of the group as a community. For Payne (2011, p. 32) in the USA, “many reform initiatives of the 1990s agreed on the need for collegiality and collaboration among teachers... Norms of isolation and competitiveness may be very strong.” High quality human relationships are strongly predictive of whether or not a school can gather itself to get better. Low quality

relationships, manifested in teacher isolation, even when their numbers are small, may be enough to shape the non-cooperation culture at school. For example teachers may think that “what goes on in my classroom is my business” (Payne, 2011, p. 80). For Elmore (2008) one of the reason why successful instructional practices never take root in a small proportion of classrooms and schools, is because teaching continues to be isolated work. Hill, Pierce and Guthrie (1997, p. 8), in addition to listing what we need to have good public schools state: “Schools should be whole organizations and true communities, act like serious enterprises that have definite goals... schools exist because their work is to do what individuals alone cannot accomplish.” Johnson & Kolderie (2011) emphasize the necessity to widen the role of teacher in decision-making of how the school runs and how the learning is handled. “This might mean that teachers form the kind of partnerships we see in other professional occupations, fully in charge and with the administrators working for them. What form this takes, or how the arrangements evolves over time in a particular school, can be left to the staff in the school to decide based on what they prefer and believe will best ensure school and student success” (p. 185).

For Elmore (2018), professional development is related with group work and collaborative practice within schools. If we want good educational practice we have to study how “teachers relate to each other in the course of their daily work” (p. 15) and we have to construct collective expectations: when expectations are collective they are factors for better achievement and performance. Cole & Weinbaum (2010) in research conducted towards reform and the scale of success, have focused on reform related to teachers’ attitudes. More than their own individual attributes, and more than new structures and materials a reform may bring to the school, teachers are influenced by the peers with whom they have formed relationship over time.

Johnson (1976) examines the relationship between school type and the participation and influence of teachers in school management, as well as between school type and the principal’s influence in certain issues and professional interaction with teachers in elementary schools. Johnson (1976) connects the word “influence” with power and control, which are born through interdependent relationships. According to Johnson, teachers involved in team teaching and joint teaching demonstrated considerably more influence in school decisions on personnel, administration, pupil management, curricula, and teaching methods than did teachers in schools where there was no collaboration. In schools where there were many teams, much joint teaching and shared decision-making, principals as well as teachers felt more, rather than less, influential. The present study is grounded in the work of research that has studied social relations that are created at school and their role in the scale of school performance (Elmore, 2008; Daly, 2010; Payne, 2011; Hess & Manno, 2011; Hill, Pierce and Guthrie, 1997, Johnson, 1976).

Method

The purpose of this study is to investigate the Teacher’s Influence Scale from their colleagues and principals, as well as its relation with school performance in public schools of the Albanian Educational System. Influence, in this study, is used according to Johnson (1976): The act of basically making the decision in question. Johnson examined teachers’ influence on four types of decisions. This study takes into consideration only pupil management, focusing on expectations regarding quality of achievement. There are three hypotheses:

H 1: Teachers are influenced by their colleagues and principals regarding expectations for the quality of pupil achievement.

H 2: Teaching years of experience are not significantly related to how influenced teachers are by their colleagues and principals.

H 3: School performance is related to how influenced teachers are by colleagues and principals.

In order to test the hypotheses, a set of questions was developed, asking teachers to assess how much they are influenced by their colleagues and principals. For this reason, the present study used a short questionnaire with six items. The survey instrument comprised demographic and influence questions. The first three items are related to demography and included: age, teaching years of experience, and gender. Two other items are related to influence by the colleagues and principal. Each of these items was scored into a Likert-type scale from 1 (Never) to 5 (Always); reliability for the influence: $N = 2$; Cronbach's Alpha .693. The items related to influence are:

1. Does your colleague influence your expectations regarding the quality of achievement of your pupil/student?
2. Does your principal influence your expectations regarding the quality of achievement of your pupil/student?

The last item, the sixth, regarding the quality of school performance, was fulfilled by the researcher according to the data collected from the Educational Directory. All the questionnaires were administrated by the author, in order to minimize the validity problems relating to interviewer variation and bias. The data were collected for a group of 428 Albanian teachers, teaching in low-secondary and high-secondary level, respectively: 214 teaching in schools with higher performance and 214 teaching in schools with lower performance. The schools are, in total, 20: 10 schools with higher performance and 10 with lower performance. For each city (Tirana, Kamëz, Elbasan and Shkodra) the number of chosen schools are 4 (2 for each level of performance), except Tirana city (8 schools in total, 4 of each level of performance). The sample consisted of: 332 Women (77.6 %), 58 Men (13.6 %); 38 (8.9 % failed to reply).

Sample

Data for age (4 groups), teacher years of experience (5 groups) and the statistic regarding the sample are in the tables below (1, 2 and 3). The sample is composed mostly of female teachers.

Table 1. Data regarding age of the sample

Age		Frequency	Percent	Valid %	Cumulative %
Valid	21-30 years old (1)	27	6.3	6.4	6.4
	31-40 years old (2)	143	33.4	33.6	40.0
	41-50 years old (3)	161	37.6	37.9	77.9
	Over 51 years old (4)	94	22.0	22.1	100.0
	Total	425	99.3	100.0	
Missing	Without answer	3	.7		
Total		428	100.0		

Table 2. Data regarding the teacher years of experience of the sample

Teacher years of experience		Frequency	Percent	Valid %	Cumulative %
Valid	1-5 years (1)	35	8.2	8.4	8.4
	6-10 years (2)	60	14.0	14.4	22.8
	11-20 years (3)	146	34.1	35.1	57.9
	21-30 years (4)	116	27.1	27.9	85.8
	Over 31 years (5)	59	13.8	14.2	100.0
	Total	416	97.2	100.0	
Missing	Without answer	12	2.8		
Total		428	100.0		

Table 3. Statistics

		School performance higher or lower	Gender	Age	Teacher years of experience
N	Valid	428	390	425	416
	Missing	0	38	3	12
Mean		1.5000	1.1487	2.7576	3.2500
Median		1.5000	1.0000	3.0000	3.0000
Minimum		1.00	1.00	1.00	1.00
Maximum		2.00	2.00	4.00	5.00
Percentiles	25	1.0000	1.0000	2.0000	3.0000
	50	1.5000	1.0000	3.0000	3.0000
	75	2.0000	1.0000	3.0000	4.0000

Results

Teacher-Teacher Influence and Teacher-Principal Influence: Results of Questionnaire

Table 4 shows the mean, median and mode of all teachers' reports, independent of the type of school performance. In each of the columns are reports for both kinds of influence: teachers from colleagues and from the principals.

Table 4. Mean, median and mode of teachers reporting

Statistics		Teacher-teacher influence, for: "expectations regarding the quality of achievement of your pupil"	Teacher-principal influence, for: "expectations regarding the quality of achievement of your pupil"
N	Valid	406	408
	Missing	22	20
Mean		2.5197	2.1789
Median		2.0000	2.0000
Mode		2.00^a	2.00
a. Multiple modes exist. The smallest value is shown			

Tables 5 and 6 show the ranking answers with: frequency, percent, valid and cumulative percent. The responses are divided in two tables: table 5 teacher-teacher influence and table 6 teacher-principal influence. Important differences among these influences are apparent. The great majority of teachers perceived themselves to be "never" and "rarely" influenced by their

colleagues and principals. 22.9 of teachers report that they never are influenced by their colleagues and 31.1% of teachers report that they never are influenced by their principals.

At the other extreme are the answers “always” and “very often.” 2.3 % of teachers report that they always are influenced by the principals regarding setting expectations for the quality of achievement of their pupils and 4.7 % of them report that they are “always” influenced by their colleagues for the same issue.

Table 5. Ranking answers for teacher-teacher influence

Teacher-teacher influence, for: "expectations regarding the quality of achievement of your pupil"					
		Frequency	Percent	Valid %	Cumulative %
Valid	Never	98	22.9	24.1	24.1
	Rarely	109	25.5	26.8	51.0
	Sometimes	109	25.5	26.8	77.8
	Very often	70	16.4	17.2	95.1
	Always	20	4.7	4.9	100.0
	Total	406	94.9	100.0	
Missing	Without answer	22	5.1		
Total		428	100.0		

Table 6. Ranking answers for teacher-principal influence

Teacher-principal influence, for: "expectations regarding the quality of achievement of your pupil"					
		Frequency	Percent	Valid %	Cumulative %
Valid	Never	127	29.7	31.1	31.1
	Rarely	148	34.6	36.3	67.4
	Sometimes	76	17.8	18.6	86.0
	Very often	47	11.0	11.5	97.5
	Always	10	2.3	2.5	100.0
	Total	408	95.3	100.0	
Missing	Without answer	20	4.7		
Total		428	100.0		

Correlation of Influence with Other Variables: Teacher Years of Experience and Age

In these data, gender is excluded because the sample is mostly from females. The results of the questionnaire show the absence of any correlation between influence and teacher years of experience and between influence and age. These variables do not play any important role in the scale of influence.

Table 7. Correlation with teacher years of experience and age

Correlation		Teacher-teacher influence: "expectations, quality of achievement of your pupil"	Teacher-principal influence: "expectations, quality of achievement of your pupil"	Teacher years of experience	Age
Teacher-teacher influence: "expectations the quality of achievement of your pupil"	Pearson Correlation	1	.532**	.035	-.015
	Sig. (2-tailed)		.000	.488	.757
	Sum of Squares and Cross-products	557.342	260.815	18.177	-6.355
	Covariance	1.376	.662	.046	-.016
	N	406	395	395	403
Teacher-principal influence: "expectations the quality of achievement of your pupil"	Pearson Correlation	.532**	1	.014	-.022
	Sig. (2-tailed)	.000		.773	.653
	Sum of Squares and Cross-products	260.815	467.939	6.899	-8.272
	Covariance	.662	1.150	.017	-.020
	N	395	408	397	405

In the data collected regarding teaching years of experience (Tables 8a and 8b), teachers with 1-5 years (Table 8a) of experience have the more significant and interesting data: 35.3% of them report they are never influenced by their colleagues and 0% of them report they are always influenced by their colleagues. The same could be said (Table 8b), for this group of teaching years, about the influence from their principals. 34.3% of them report they are never influenced by their principals and 0% of them report they are always influenced by their principals.

Teachers with over 31 years of experience are more accepting of these two kinds of influences: 9.1% report they are always influenced by their colleagues and 7.3% report they are always influenced by their principals. But in all groups of teaching years of experience, the answers are mostly “never” and “rarely” regarding the influence from both colleagues and principals (see Figure 1 for Teacher-teacher influence according to teaching years of experience).

Table 8a. Teacher-teacher influence according to teaching years of experience

Crosstab			Teaching years of experience					Total
Influence: “expectations of the quality of achievement of your pupil”			1-5 years	6-10 years	11-20 years	21-30 years	over 31 years	
Teacher-teacher	Never	Count	12	11	32	28	13	96
		% within teaching years	35.3%	19.6%	22.7%	25.7%	23.6%	24.3%
	Rarely	Count	5	12	46	30	13	106
		% within teaching years	14.7%	21.4%	32.6%	27.5%	23.6%	26.8%
	Sometimes	Count	9	20	39	27	11	106
		% within teaching years	26.5%	35.7%	27.7%	24.8%	20.0%	26.8%
	Very often	Count	7	13	16	19	13	68
		% within teaching years	20.6%	23.2%	11.3%	17.4%	23.6%	17.2%
	Always	Count	1	0	8	5	5	19
		% within teaching years	2.9%	0.0%	5.7%	4.6%	9.1%	4.8%
Total		Count	34	56	141	109	55	395
		% within teaching years	100%	100%	100%	100%	100%	100%

(Chi-square test: Pearson Chi-Square = 20.515^a, df = 16, Asymp. Sig. 2-sided = .198, a. 3 cells (12.0%) have expected count less than 5. The minimum expected count is 1.64.)

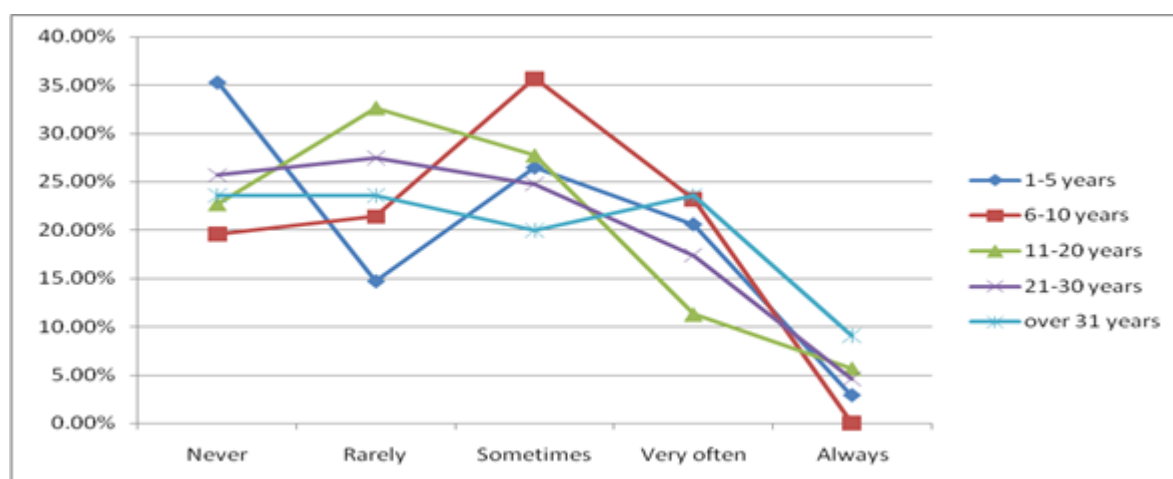


Figure 1. Teacher-teacher influence according to teaching years of experience

Table 8b. Teacher-principal influence according to teaching years of experience

Crosstab Influence, for: “expectations regarding the quality of achievement of your pupil”			Teaching years of experience					Total
			1-5 years	6-10 years	11-20 years	21-30 years	over 31 years	
Teacher- principal	Never	Count	12	14	41	37	19	123
		% within teaching years	34.3%	24.1%	29.9%	33.0%	34.5%	31.0%
	Rarely	Count	12	20	55	39	20	146
		% within teaching years	34.3%	34.5%	40.1%	34.8%	36.4%	36.8%
	Some- times	Count	8	19	24	17	6	74
		% within teaching years	22.9%	32.8%	17.5%	15.2%	10.9%	18.6%
	Very often	Count	3	5	14	17	6	45
		% within teaching years	8.6%	8.6%	10.2%	15.2%	10.9%	11.3%
	Always	Count	0	0	3	2	4	9
		% within teaching years	0.0%	0.0%	2.2%	1.8%	7.3%	2.3%
Total		Count	35	58	137	112	55	397
		% within teaching years	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

(Chi-square test: Pearson Chi-Square = 21.761^a, df=16, Asymp. Sig. 2-sided = .151, a. 6 cells (24.0%) have expected count less than 5. The minimum expected count is .79).

Teacher-Teacher and Teacher-Principal Influence Related to School Performance: Results of the Questionnaire

The information presented in this section aims to evaluate the relation between teacher-teacher and teacher-principal influence with school performance. Information is classified according to school performance: schools with higher and lower performance. The evaluation of school performance is based on the same criteria, but the schools are located in different cities of Albania (Tirana, Kamëz, Elbasan and Shkodra). Data on school performance were taken from the Educational Directory of each city. In Table 9a and 9b are data for the mean, median, standard deviation, standard error, 95% confidence interval for mean, minimum and maximum and between-component variance. Schools with lower performance have a slightly greater value for the teachers' influence from their principals. Figures 2 and 3 show the medians for teacher-teacher influence and teacher-principal influence according to the level of school performance.

Table 9a. Data for the mean, median, standard deviation, standard error, 95% confidence interval for mean (Min. = 1 and Max. = 5) and between-component variance for both kinds of influence

Descriptive Influence, for: "expectations regarding the quality of achievement of your pupil"		N	Mean	Std. Deviat.	Std. Error	95% Confidence Interval for Mean		Betw. Comp. Varian.
						Lower Bound	Upper Bound	
Teacher-teacher	Schools with higher perform.	204	2.4755	1.05718	.07402	2.3295	2.6214	
	Schools with lower perform.	202	2.5644	1.28067	.09011	2.3867	2.7420	
	Total	406	2.5197	1.17310	.05822	2.4053	2.6342	
	Model			1.17370	.05825	2.4052	2.6342	
	Fixed Effects				.05825^a	1.7796^a	3.2598^a	-.00284
Teacher-principal influence	School with higher perform.	206	2.0097	.93699	.06528	1.8810	2.1384	
	School with lower perform.	202	2.3515	1.17190	.08245	2.1889	2.5141	
	Total	408	2.1789	1.07225	.05308	2.0746	2.2833	
	Model			1.05982	.05247	2.0758	2.2821	
	Fixed Effects				.17089	.0075	4.3503	.05290

Table 9b. Between and within group analysis

ANOVA Influence, for: "expectations regarding the quality of achievement of your pupil"		Sum of Squares	df	Mean Square	F	Sig.
Teacher-teacher influence	Between Groups	.802	1	.802	.582	.446
	Within Groups	556.541	404	1.378		
	Total	557.342	405			
Teacher-principal influence	Between Groups	11.914	1	11.914	10.607	.001
	Within Groups	456.025	406	1.123		
	Total	467.939	407			

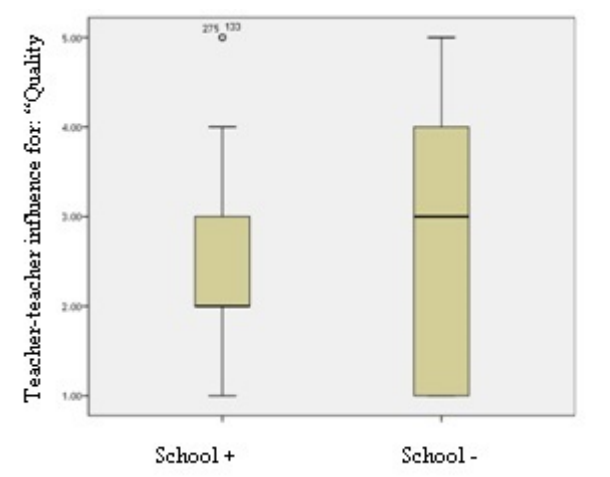


Figure 2. Teacher-teacher influence for: “Quality of achievement of pupil” (*Legend: school+ with higher performance and school- lower performance*)

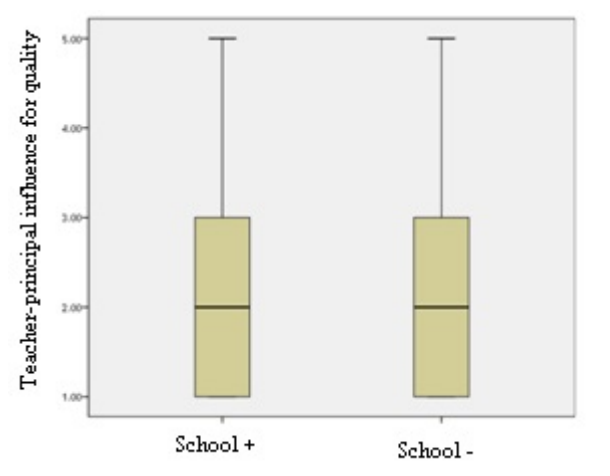


Figure 3. Teacher-principal influence for “Quality of achievement of pupil” (*Legend: school+ with higher performance and school- lower performance*)

Table 10 and Table 11 have detailed data for the answers: never, rarely, sometimes, very often and always. The greatest tendency for both kinds of influence takes place in never, rarely and sometimes. The lowest percentage is for the answer: always.

Table 10. Teacher-teacher influence, for: "expectations regarding the quality of achievement of your pupil"

Crosstab Influence, for: "expectations regarding the quality of achievement of your pupil"			School performance		Total
			Higher	Lower	
Teacher-teacher influence	Never	Count	42	56	98
		% within school performance	20.6%	27.7%	24.1%
	Rarely	Count	65	44	109
		% within school performance	31.9%	21.8%	26.8%
	Some-times	Count	59	50	109
		% within school performance	28.9%	24.8%	26.8%
	Very often	Count	34	36	70
		% within School performance	16.7%	17.8%	17.2%
Total		Count	204	202	406
		% within School performance	100.0%	100.0%	100.0%

School performance, results of questionnaire (Chi-square test: Pearson Chi-Square = 14.037^a, df = 4, Asymp. Sig. 2-sided = .007, a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.95).

Table 11. Teacher-principal influence, for: "expectations regarding the quality of achievement of your pupil"

Crosstab Influence, for: "expectations regarding the quality of achievement of your pupil"			School performance		Total
			Higher	Lower	
Teacher-principal influence	Never	Count	68	59	127
		% within school performance	33.0%	29.2%	31.1%
	Rarely	Count	87	61	148
		% within school performance	42.2%	30.2%	36.3%
	Some-times	Count	34	42	76
		% within school performance	16.5%	20.8%	18.6%
	Very often	Count	15	32	47
		% within school performance	7.3%	15.8%	11.5%
Total		Count	206	202	408
		% within school performance	100.0%	100.0%	100.0%

School performance, results of questionnaire (Chi-square test: Pearson Chi-Square = 15.759^a, df = 4, Asymp. Sig. 2-sided = .003, a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 4.95).

Research Limitations

This study has some limitations:

- Schools were classified based on their performance. They were located in different cities, and included in different Educational Directories. Although the criteria are the same, the school performance of different cities is not always the same.
- The limited number of items used on the questionnaire.
- The perception of influence may have been different among teachers.

The study reports only the perceptions of teachers about this issue. The principals' view of the matter was not asked. An assumption is that, because all the reporters hold the same position, their perception about the influence, at least regarding these issues, must be the same. Also, this study focused on extreme cases: schools with the higher and lower performance. Even with these limitations, empirical studies such as this help examine what happens at the school level. For if we want improvements on a large scale, we have to go to the schools and study them from inside (Elmore, 2008).

Discussion and Conclusions

In this study, influence is examined from teacher to teacher and from principal to teacher, for an important issue: the quality of expectations for pupils' achievement. In order to test the theory that a greater degree of influence is related to better decision making, achievement and attitudes towards influence, were considered.

H 1: Teachers are influenced by their colleagues and principals regarding the expectations for the quality of pupil achievement

Pearson correlation for the two items of influence is 0.532. The results show that the teachers are influenced, in average terms, more from their colleagues than from the principals, respectively. The scale of teachers influence, regarding the expectations for the quality of pupil's achievement by their colleagues and principals, is very low. About the influence of principals, Johnson (1976) argued that "he needs only a few good communication links rather than many in order to be reasonably well informed and to exert influence by making his ideas and his judgment known." These links, in the case of principals of Albanian Public schools, seem that they are in this level: only 2.5% of the teachers say that are always influenced by principals and 11.5% very often. 31.1% of the teachers declared that they are never influenced by their principals. In Johnson's study, the result about principals' influence regarding pupil achievement is 41% (N = 77 out of 188). In the case of Albanian schools, if we group all the answers: sometimes, very often and always, this is altogether 128 teachers or 32.3% of the sample. So, regarding the teachers' perception, only 32.3 % report that they are influenced by their principals. The situation is a little bit better in the case of teacher-teacher influence.

H 2: Teaching years of experience are not significantly related to how influenced teachers are by their colleagues and principals

The Chi-Square test had a reasonable value 20.515 (df =16), although this value was not significant. According to Fox (2003: 303) for df = 16, Chi-Square must be a value of 26.296 (.05). Pearson Correlation and sig. (2 tailed) confirmed the same.

H 3: School performance is related to how influenced teachers are by colleagues and principals

In the case of Albanian Public schools, both kinds of influences are very low. It's worthwhile to note that the influence from the colleagues and principals on teachers from schools with

lower performance represent a better value (although slight). More than results of collective teacher and principal effort, school success is the result of other factors, including, but not only, the school community background. Further study also might explore another issue for Albanian public schools: the instability of principals. In almost all the schools, the principals were assigned recently, mostly after the last political election. Even after 25 years of transition, the principal position continues to be political and is under the influence of different political parties. Further studies might explore how school improvement is perhaps related to the absence of teachers' desire to set up close collaboration with principals, which makes the teachers' profession more isolated and potentially undermines school performance.

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Exemplary Chinese University Professors: Qualities and Impact on Students

Eugene P. Kim and Mathias Olson

Abstract

This study focuses on the qualities of Chinese university professors as perceived by their students and the effects of those qualities on student learning and motivation. Specifically, what qualities and personal characteristics do Chinese university students attribute to their favorite and least favorite professors, and how do those qualities and characteristics affect Chinese university students? Out of 280 students surveyed from three different universities, 226 surveys were completed, returned and included in the final analysis (response rate of 80.7%). The research found that Chinese students favored professors who are entertaining, who help them learn more and who provide them with helpful feedback on their assignments. Students disfavor professors who are boring, arrogant and do not provide helpful feedback or help them learn more. Linear regressions revealed a connection between high quality professors and student learning and motivation. Along with other studies, this research provides evidence that effective university professors are those who not only possess expertise in their fields, but in addition are engaging, student-focused and able to build rapport with their students.

Keywords: teacher quality; teacher evaluation; characteristics of teachers; model teachers; teacher impact; teacher-student relationship; student motivation; student-centered education; affect in education

Introduction

Stemming from a Confucian worldview, teachers have historically been honored and revered in Chinese society. Over the past 2,500 years, generations of students have dedicated themselves to arduous study in order to meet the rigorous requirements of China's civil examination systems (Hayhoe, 1984). The Confucian worldview places importance on a hierarchical form of obedience in which students are submissive to teachers as children would be submissive to parents. It also places morality and memorization as the cornerstones of learning. In the past, students who were able to memorize the classics and carry themselves with a high standard of moral uprightness were granted high places in government offices (Lee, 1985). Beginning in the mid-19th century, China was exposed to outside influence and internal reorganization (the end of several millennia of dynastic rule) resulting in tumultuous changes that left no sector unscathed, including the education system. The invasion of foreign powers, the tenuous Republican experiment, and the subsequent Communist liberation led to diverse and numerous reforms in Chinese education that have impacted how students in China learn today.

In contemporary China, the past few decades have ushered in even greater liberalization and experimentation in Chinese education. Deng Xiaoping's initiated the Reform Era in 1979, characterized by modernization, globalization and economic reform. Education in the Reform Era has experienced many changes in its own lifespan, but has generally been known for its emphasis on competition (Parker & Parker, 1986). Nonetheless, these changes are not without precedence as seen in the increase in household spending on education with the sole focus of preparation for the *Gaokao*, the standardized test – much like the civil examinations in the past – taken at the end of a student's high school career. The exam determines the higher education prospects for and potential future earnings of each student. Competition is also seen in the opening up of the private education sector with a plethora of private schools and test preparation centers expanding throughout China. Some of these Chinese education companies such as Xueda Education Group and New Oriental Education & Technology Group have record-breaking IPOs on the US stock exchange.

Teachers in China have traditionally been trained and expected to teach to the test; to help students memorize the information that is needed to do well on what will be the most important test of their lives. Recently however, research has indicated that rote memorization and standardized testing may not be the all-encompassing indicator of a productive or successful individual (Zhao & Ting, 2013). Although Chinese students rank high in standardized test scores when compared to the rest of the world (Al Jazeera, 2013), their perceived ability to innovate and think creatively is lacking. This is seen in China's Ministry of Education's desire to improve critical thinking skills (Ministry of Education, 2001). The traditional Chinese "virtuoso" teacher (Paine, 1990), a teacher with a vast knowledge base who teaches students to recite what he knows, is becoming less relevant in an increasingly globalized China.

As education in China changes, so does the concept of good teaching. Tam, Heng and Jiang (2009) noted that Chinese official policy have pushed toward a *jiaoren* (to teach the people) view of teaching and away from a *jiaoshu* (to teach books) view. Although some teachers and professors still hold to a more traditional view of what good teaching ought to be (Walsh & Maffei, 1994), there is a notable move towards student-centered teaching. Countries that have embraced a more student-centered methodology of teaching correlate with higher levels of critical thinking skills developed in their students (Socha & Sigler, 2012), where teachers focus on intrinsic motivation, learning for understanding, and open-ended instruction.

Primary Research Question

The purpose of this study is to examine university student perceptions of teacher quality in contemporary China. What are Chinese university students' perceptions of their professors' characteristics? How do they believe their professors affect student outcomes? In this study, teacher quality is defined as the teacher's "personality traits that help to build strong rapport with students and knowledge and skills about subject content, curriculum, and instruction" (Tam, Heng, & Jiang, 2009, p. 151). Specifically, the study aims to learn what characteristics university students attribute to exemplary and non-exemplary professors and how this might affect their academic performance.

Other Research Questions to Consider

The study also aims to know the reasons behind student preferences and whether specific professor characteristics influence the academic performance of their students. Do students work harder for professors they like? Do they learn more in their favorite professors' classes? What is the significance of student and teacher relationships? What do Chinese university students value in their professors? A study done by Tam, Heng and Jiang (2009) suggested that students in contemporary China are seeking not only a transformation of the mind, but also of the heart, arguing for the importance of student-teacher relationships and affective teaching in China.

This study is particularly relevant to university human resources offices in China and those who make decisions regarding faculty hiring, training and supervision, as these results provide evidence of characteristics and qualities that are preferred by and positively impact Chinese university students. University faculty, particularly those primarily engaged in teaching, may benefit greatly from the same results, which if applied can make them more effective in the classroom and increase student learning and motivation. Research in this field is well-established in the West, but is relatively sparse in Asia, thus the results of this study can be used as a springboard for future research in the area of teacher effectiveness, teacher qualification, and student impact.

Literature Review

Student Motivation

Student motivation is one of the most powerful determinants of student success in the classroom (Dorneyi, 1994; 2000; Jung, 2011; Oxford & Shearin, 1994; Williams, 1994). It greatly influences student involvement and achievement (Rugutt & Chemosit, 2009). When students are not motivated, they fail to grasp the concepts being taught. This is reflected in their grades and feedback from their instructors (Gan, Humphreys, & Hamp-Lyons, 2004). There is a wide range of motivation types and consequently varied approaches to motivating students. In this study, motivation will be categorized into two types, extrinsic and intrinsic. The study will primarily deal with intrinsic motivation and how teachers play a role in intrinsically motivating students. Teachers also provide extrinsic rewards such as grades or special treatment for high academic performance and participation.

Extrinsic Motivation

Extrinsic motivation can be defined as the energy and desire one directs towards a certain task; it is fueled by the possibility of external gains such as money, good grades, rewards, praise, and so on (Brown, 2007; Rugutt & Chemosit, 2009). Extrinsic motivation is also fueled by the

avoidance of punishment (Brown, 2007). Many students are motivated extrinsically through grades, praise from their instructors, and the prospect of securing a good job in the future (Pratt, Agnello, & Santos, 2009; Rugutt & Chemositt, 2009). Extrinsic motivation helps to push students toward a goal when there is a loss of intrinsic motivation. A study by Pratt et al. (2009) found that the strongest motivator among Spanish language students to continue taking Spanish classes was grades. In addition, students who received high marks persisted in studying the language because they thought it would be relevant for their future and they felt competent in the task of learning Spanish (Pratt et al., 2009). Another extrinsic motivator, which may also be categorized as intrinsic, is personal relationships. Students are motivated by the relationships they have with other students and faculty (Pratt et al., 2009; Rugutt & Chemositt, 2009). It is however unclear as to whether relationships qualify as an extrinsic or intrinsic motivator. Do students achieve for the sake of developing positive relationships, or do existing positive relationships intrinsically motivate them to achieve? Furthermore, do positive relationships correlate with academic success and learning?

Intrinsic Motivation

Intrinsic motivation represents the energy and desire directed toward a particular task; it is fueled by an innate sense of satisfaction (Brown, 2007; Rugutt & Chemositt, 2009). Intrinsic motivation is often stronger than extrinsic motivation, as it does not require an external reward or punishment, rather, it involves innate desires which are typically more stable and enduring. Students who desire to learn often have a high aptitude for a certain subject, prior knowledge, strong attention skills, and strong critical thinking skills; based on such intrinsic motivators, they also have a statistically greater chance of academic success (Rugutt & Chemositt, 2009; Socha & Sigler, 2012). This makes academic choice an important factor in motivating students.

Teachers and Students

The interaction between teachers and students has a noticeable effect on students' motivations, attitudes, and success (Micari & Pazos, 2012). In more difficult university courses, students may have less peer support and must rely on the relationships they have with their professor (Micari & Pazos, 2012). However, the impact of student–teacher interaction stretches beyond difficult courses. Greater and more positive student–teacher interaction results in more engaged students and a higher academic self-concept (Komarraju, Musulkin, & Bhattacharya, 2010; Micari & Pazos, 2012; Umbach & Wawrzynski, 2005). When considering this interaction, it is important to take into account the relationships that teachers develop with their students and the effects these relationships have.

Teachers' Relationships with Students

Human interaction has consequences that influence the behaviors and outcomes of ourselves and others. In academia, it is no different. In the context of an organic chemistry course, a study by Micari and Pazos (2012) revealed that students who felt they had a positive relationship with their professor scored higher in the course than those who felt they did not have a positive relationship. In that study, the researchers defined a positive relationship as “looking up to the professor, feeling comfortable approaching the professor, and feeling that the professor respects the students.” In other words, according to Micari and Pazos (2012), positive relationships are correlated to positive academic results.

Estepp and Roberts (2013) found a positive relationship between rapport and student expectancy for success. Students who have good relationships with their professors tend to

think they will succeed in class. However, the quality of the teacher–student relationship depends both on the teacher as well as the student.

Teachers' Influence on Student Motivation

Studies have shown that an emphasis on student–faculty interaction, encouraging students, providing positive feedback to students, developing personal connections with students, and cultivating a positive environment in the classroom all strongly affect student motivation (Rugutt & Chemosit, 2009; Hardre, 2012; Hardre, Sullivan, & Crowson, 2009; Tam, Heng, & Jiang, 2009). Positive teacher interactions with students are a statistically significant predictor of student motivation, thereby influencing positive academic change (Rugutt & Chemosit, 2009). Motivational teachers are able to identify learning barriers and create effective strategies to help their students overcome them, most often giving relevance to the subject matter, creating student interest and developing a genuine and personal connection with students (Hardre, 2012; Hardre & Sullivan, 2009). One study showed that uninteresting classes and lack of will to study discouraged students from learning (Jung, 2011). Another found that overarching themes of caring and high expectations motivated at-risk adolescent students to graduate from high school (Rowan, 2013). Students respond to teachers who are genuinely interested in them as individuals, not just an audience to relay information to.

Teacher Qualities

The personal and professional qualities and characteristics of teachers influence the motivation and output of students at all school levels (Gennerman, 2009; Liu & Meng, 2000; Miller, 1987; Reynolds & Tedlie, 2000). Teachers who have positive social, professional, and organizational qualities tend to have students that are more likely to be motivated and produce quality learning outcomes (Buchanan, 2007; Liu & Meng, 2009; Miller, 1987; Reynolds & Tedlie, 2000; Tam et al., 2009). When teachers are unorganized, unprofessional, apathetic, and boring, student learning outcomes and motivation are negatively affected (Foote, Vermette, Wisniewski, Agnello, & Pagano, 2000; Strickland, 1998). It is important to consider the personal and professional qualities of a teacher in light of the motivation and learning outcomes of students.

Characteristics of Exemplary Teachers

Great teaching is instruction communicated to students that is effectively processed by students and applied to their studies and life. According to students in a study by Miller (1987), exemplary teachers have contagious enthusiasm, time for student questions and comments, control of the classroom pace, and competency in their chosen field. They are humorous, encouraging, patient, caring, creative, and challenging. Effective teaching processes include time management, classroom organization (preparing lessons in advance), explaining the purpose and structure of the lesson, using effective teaching practices, and adapting practices to different sets of learners (Liu & Meng, 2009; Reynolds & Tedlie, 2000). Exemplary teachers put forth a persistent effort to see students achieve and want to grow in their own profession as well (Gennerman, 2009).

Exemplary teachers possess a set of both internal and external characteristics. These internal characteristics include a strong view of self, a positive view of others and the work of teaching, use of humor in the classroom, desire to learn continuously, and commitment to giving students what they need (Gennerman, 2009). In conjunction, exemplary teachers possess the following external characteristics: working in a risk-taking environment, using research-based practices, having a strong connection with students, and working together with colleagues and

administration. Numerous studies support these findings, reporting that exemplary teachers have a strong connection with their students, are humorous in class, and tend to be positive (Buchanan, 2007; Liu & Meng, 2009; Miller, 1987; Reynolds & Tedlie, 2000; Tam et al., 2009).

In contrast, weak teachers do not have adequate knowledge of the subject they are teaching, have poor classroom control, act unprofessionally, focus on inappropriate teaching goals or have no goals at all, and emphasize methods rather than students (Foote et al., 2000; Strickland, 1998). Poor teachers make students dislike the subject matter by making it seem boring or irrelevant (Foote et al., 2000). One obvious characteristic that weak teachers share is inconsistency (Foote et al., 2000; Strickland, 1998). They may be too strict at times and too lenient at other times, often emotionally temperamental and lacking self-control when displaying their displeasure with students. Weak teachers do not work well with their colleagues and administration and are found to be lazy (Foote et al., 2000). Many of the characteristics of exemplary teachers are the opposite of those of weak teachers.

Chinese Student Perceptions of Teachers

Student performance is influenced by their perceptions of and interactions with their teachers (Buchanan, 2007; Hardre, 2012; Hardre & Sullivan, 2009; Rugutt & Chemosit, 2009; Tam et al., 2009). In China, these effects are comparable with undergraduate students reporting that they desire teachers who are enthusiastic about their class, have a sense of humor, are competent, show a certain degree of expertise, are caring, are entertaining, use different teaching methods, are able to communicate effectively, are fair and approachable, are able to make students feel smart, are organized, use relevant material, lead lively discussions, and encourage students to be creative (Levy & Peters, 2002; Mu, 2002; Tam et al., 2009). Mu (2002) classified qualities of a good teacher into three categories, namely personality, competence, and delivery. Medical students in Mu's (2002) study reported that their favorite teachers were those who possessed these qualities. Although some of these attributes are congruent with the traditional view of a Chinese teacher, many have been influenced by reform and globalization. Chinese undergraduate students in the 21st century have the world at their fingertips. Because of the internet, different social and political ideologies are a finger click away. They exercise a greater amount of freedom than their parents and have not experienced major social or political commotion in their lifetime (Tam et al., 2009). These factors, among others, influence what Chinese undergraduate students want from their professors. Students want teachers who are competent and knowledgeable, genuinely interested in the subject, and challenge their thinking. They want a close relationship with their teacher (Buchanan, 2007).

In contrast, students do not want teachers and professors who are arrogant, selfish, and teach directly from the book (Buchanan, 2007; Hardre, 2012; Hardre & Sullivan, 2009, National Public Radio [NPR], 1977). They want to be interested in the subject they are studying, and they want their teachers to make the subject interesting.

Methodology

Approach

Empirical survey research, soliciting both quantitative and qualitative data, was utilized for this study. Data was collected from January to March, 2014 in Shanghai.

Sampling

This study used convenience sampling and purposive sampling, similar to the sampling employed by Tam et al. (2009). Surveys were sent out to three different universities in Shanghai, and Chinese students ages 18–36 were recruited as participants. The sampling was focused on students who had completed at least one year of university, as their responses would more likely reflect their experience with higher education rather than secondary schooling. The participants were limited to English majors or those with a sufficient command of the English language as the survey was written in English. Students in English elective courses on the campuses of Chinese universities were surveyed. In addition, participants were solicited in high traffic areas of the campus. The total number of surveys distributed was 279. Only 226 surveys were completed thoroughly enough to be suitable for analysis.

Instrument

Participants were asked to provide demographic information such as their age, gender, major, average grade point average (GPA), home province, and year of school. They were then asked to identify the ethnicity of their favorite teacher and their least favorite teacher, the subjects they taught, and three qualities to describe each of the two teachers. A five-point Likert scale was then employed to determine whether students completely disagreed or completely agreed with a set of 10 statements about their favorite professor and their least favorite professor. The first five statements were about professor characteristics: expertise, caring, entertaining, high expectations, and good lecturing ability. The next five statements focused on student feelings in the class: feeling smarter, learning more, feeling respected, receiving helpful feedback, and trying harder. The final question was open ended and asked students to finish the statement taken from the survey by Tam et al. in their 2009 study: “I wish my university professor would...” The surveys were anonymous and the information provided was given voluntarily. Similar to Tam et al. (2009), the qualitative data collected were analyzed, coded, and categorized according to similar words, phrases, and sentences. Descriptives and regressions were applied to the quantitative data.

Demographics

Age of Participants

The youngest student surveyed was 18 years old and the oldest was 36 years old at the time of the survey. The range of ages spanned 18 years. The mean age of students surveyed was 21.5 years ($SD=2.8$). The median age of students surveyed was 20.5 years. The mode age of students surveyed was 20 years.

Gender of Participants

Of the students surveyed, 55% (119) were male and 45% (97) were female. Ten respondents did not answer the gender question on the survey. In 2009, the ratio between males to females in Shanghai was 103–107 males to every 100 females (Caguioa, 2010), and between 50.3% and 51.9% of college admissions in China were female in 2013 (Xinhuanet.com, 2013). The data collected slightly exceeded the normal population distribution as reported by Caguioa (2010). It was also off by approximately 5% in relation to the male to female ratio among students in Chinese universities.

Household Income of Participants

The average Chinese national monthly income is 2,600 RMB; however, Shanghai has a higher average monthly income, at 3,200 RMB (NY Times, 2013). The vast majority of student households earned above the national average of 2,600 RMB per month. In fact, they earned more than double the national average. Only 16% (30) of participants' families earned similar to or less than the national average. Exactly 84% (152) of participant' families earned more than the national monthly average, while 51% of participants' families earned more than double the national monthly average. The average monthly income in China varies greatly depending on location (rural or urban, coastal or inland) and educational background (Gaokao, college graduates). It is expected that their status as elite university students contributes to the higher than average family income ranges.

Participants' Majors

Student majors were broken down into seven categories, which included medical, humanities/communications, engineering/technology, language, life/physical sciences, math, or economics/business majors. The medical major category included nursing, pre-med, surgery and gynecology students. Humanities included law, art history, and philosophy. Language majors (of which there were only 10; 5% of the sample) were studying Chinese language, English, and teaching Chinese to speakers of other languages. Life and physical science majors included biology, physics, chemistry, and anatomy. Math and economics/business majors were self-inclusive. Of the 226 students surveyed, 28 (12%) left the question of college major blank, which left the participant pool at $N=198$. Most of the students were majoring in the fields of technology/engineering (33%) and medicine (29%). As stated above, only 5% of participants studied a language. However, the lowest percentages were found in economics/business and math, only 8% of the sample.

Data Analysis

The following data reveals what undergraduate college students in Shanghai think of their favorite and least favorite teachers visualized through frequency tables and descriptive statistics. The goal during analysis was to determine the qualities of students' favorite teachers and least favorite teachers and identify attributes that favorite teachers have in common with one another and that least favorite teachers have in common with one another. Frequency tables show how common answers were distributed among survey participants.

Favorite Professors

The first five items related to characteristics of favorite professors and the next five related to how favorite professors made students feel. The first five items were as follows:

- “My favorite professor is an expert in his/her field,”
- “My favorite professor cares about students,”
- “My favorite professor is entertaining,”
- “My favorite professor has high expectations of his/her students,”
- “My favorite professor is a strong lecturer.”

Students indicated greatest agreement concerning three characteristics of favorite teachers, namely expertise (85%), being entertaining (84%), and caring (83%).

The next five statements concerning favorite professors were directed at how the professors made the student feel and act. These statements were as follows:

“As a student, I feel smarter in my favorite professor’s class,”
 “I learn more in my favorite professor’s class,”
 “I feel respected by my favorite professor,”
 “I receive helpful feedback from my favorite professor,”
 “I try harder for my favorite professor.”

Students indicated greatest agreement with three effects on students, as follows: feeling respected (82%), learning more (79%), and receiving helpful feedback (78%).

Linear Correlations for Respondents’ Favorite Professor

As seen in Table 1, the mean scores for favorite professor characteristics ranked expertise in the field as the highest ranked (mean = 4.34, s.d.=0.99). Entertaining (mean = 4.28, s.d. = 1.04) and cares about students (mean = 4.23, s.d. = 0.98) rank second and third. Ranking by mean score ran parallel to the results of frequencies measuring agreement with the same characteristics of favorite professors.

In addition, we measured means and standard deviations of questions evaluating students’ perceptions of the effect that favorite professors had on them. As seen in Table 1, amongst the five questions, students rated “feeling respected” highest (mean = 4.21, s.d. = 1.03), followed by “learning more” (mean = 4.19, s.d. = 1.01) and “receiving helpful feedback” (mean = 4.12, s.d. = 0.99). Similarly, these rankings by mean scores were identical to the rankings when measuring agreement with the respective set of questions measuring student perceptions of favorite professors’ effects on student outcomes.

Table 1. Means and standard deviations of how participants think and feel about their favorite professors

<u>Teacher Quality</u>	<u>Mean</u>	<u>Standard Deviation</u>
Expert in the Field	4.34	(0.99)
Cares about Students	4.23	(0.98)
Entertaining	4.28	(1.04)
Has High Expectations	4.07	(0.99)
Strong Lecturer	4.15	(1.01)
<u>Professor’s Effect on Student</u>		
Feeling Smarter	3.89	(1.02)
Learn More	4.19	(1.01)
Feel Respected	4.21	(1.03)
Receive Helpful Feedback	4.12	(0.99)
Try Harder	4.04	(1.03)

Participant responses were measured on a Likert scale where 1=completely disagree and 5=completely agree.

Analyzing for relationships between the questions measuring favorite professor qualities and those measuring effect of favorite professors, a linear correlation was conducted with the following results (see Table 2).

Table 2. Correlations between five teacher qualities and five effects on participants for favorite professors

Measures	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
1. Expertise	-									
2. Caring	0.68	-								
3. Entertaining	0.62	0.68	-							
4. Expectations	0.57	0.58	0.46	-						
5. Good Lecturer	0.64	0.61	0.61	0.59	-					
6. Feel Smarter	0.57	0.58	0.55	0.44	0.58	-				
7. Learn More	0.59	0.57	0.50	0.39	0.56	0.63	-			
8. Feel Respected	0.63	0.68	0.61	0.51	0.52	0.51	0.64	-		
9. Good Feedback	0.58	0.61	0.51	0.45	0.59	0.52	0.64	0.69	-	
10. Try Harder	0.55	0.56	0.45	0.44	0.56	0.51	0.62	0.59	0.66	-

Participant responses were measured on a Likert scale where 1 = completely disagree and 5 = completely agree.

All p-values < 0.05.

As seen in Table 2, all questions measuring favorite teachers' qualities revealed a moderate correlation with questions measuring student perceptions of favorite teachers' affect on student outcomes (with correlation coefficients ranging from $r = 0.39$ to $r = 0.68$, $p < 0.05$). The strongest correlations were seen between feeling respected and caring ($r = 0.68$, $p < 0.05$), feeling respected and expertise ($r = 0.63$, $p < 0.05$), feeling respected and entertaining ($r = 0.61$, $p < 0.05$) and good feedback and caring ($r = 0.61$, $p < 0.05$). Caring had the highest average correlation with student outcomes ($r_{ave} = 0.60$, $p < .05$). High expectations had the weakest average correlation with student outcomes ($r_{ave} = 0.45$, $p < .05$).

Favorite Professor Qualities

Student participants were asked to name three qualities of their favorite professor. Through open and selective coding, nine types of qualities that students attributed to their favorite professor were identified. These were as follows: appearance, ease, enthusiasm, experience, entertaining, intelligence, professional skills, personal relationship, and negative qualities.

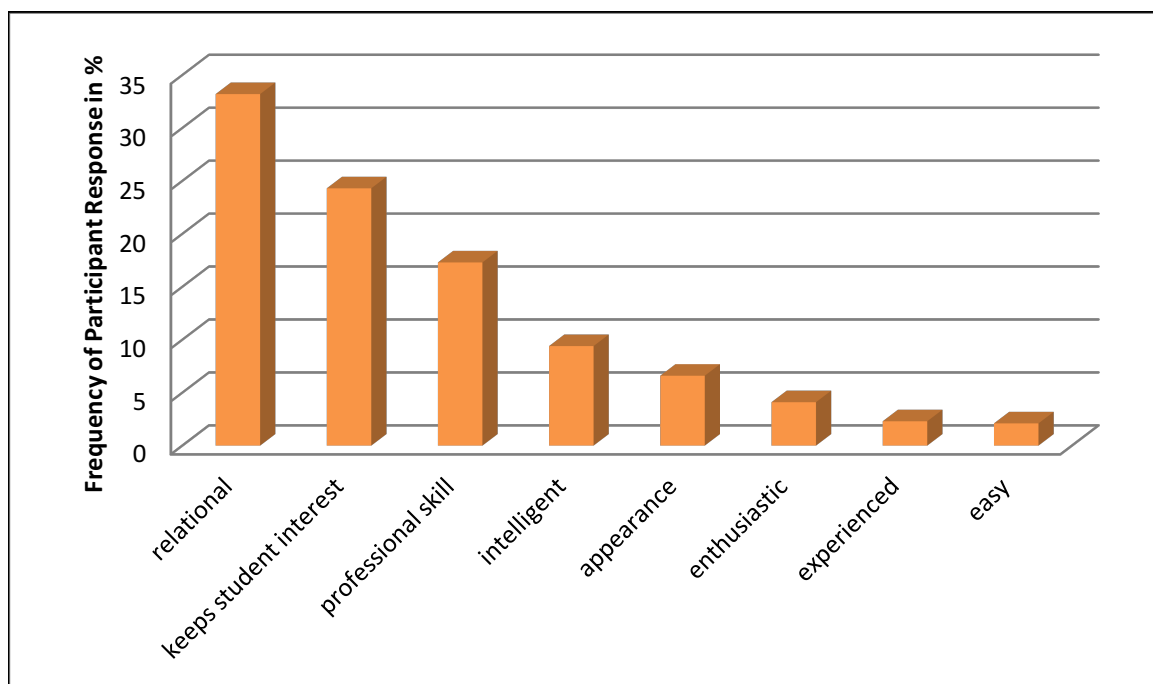


Figure 1. Percentage of all responses to the prompt “Name three qualities of your favorite professor” ($N = 207$).

When we aggregated all three responses from each student (see Figure 1), relational connection (32%) and keeping students interested (24%) were the top ranked characteristics offered by students.

Least Favorite Professors

The first five items in this section of the survey related to characteristics of least favorite professors and the next five related to how least favorite professors made students feel. The first five items were as follows:

- “My least favorite professor is an expert in his/her field,”
- “My least favorite professor cares about students,”
- “My least favorite professor is entertaining,”
- “My least favorite professor has high expectations of his/her students,”
- “My least favorite professor is a strong lecturer.”

For the majority of students, their least favorite professors lacked all of the qualities that their most favorite professors possessed. Out of the five characteristics, expertise was ranked the most prevalent characteristic (45%) for least favorite professors. However, only 19% of students agreed that their least favorite professor was entertaining. Likewise, less than one third of participants agreed that their least favorite professor was caring (28%), had high expectations (29%) or was a good lecturer (30%).

The next five statements concerning least favorite professors were directed at how the professor made the student feel and act. These statements were as follows:

- “As a student I feel smarter in my least favorite professor’s class,”
- “I learn more in my least favorite professor’s class,”
- “I feel respected by my least favorite professor,”
- “I receive helpful feedback from my least favorite professor,”
- “I try harder for my least favorite professor.”

There was no effect that reached the threshold of 25% of the sample. The greatest agreement was found for the responses “feel respected” (24%) and “try harder” (23%). Relatively few participants in the sample indicated agreement that their least favorite professor helped them to learn more (15%), feel smarter (16%) or receive helpful feedback (18%).

Linear Correlations for the Least Favorite Professor

As seen in Table 3, the mean scores for least favorite professor characteristics ranked expertise in the field as the highest ranked (mean = 3.33, s.d.= 1.71). High expectations (mean = 2.90, s.d. = 1.20) and cares about students (mean = 2.80, s.d. = 1.13) rank second and third. Though the highest ranked category remained the same, the mean scores largely differed from the frequency analysis of agreement with the same characteristics of least favorite professors.

In addition, we measured means and standard deviations of questions evaluating students’ perceptions of the effect that least favorite professors had on them. As seen in Table 3, amongst the five questions, students rated “feeling respected” highest (mean = 2.73, s.d. = 1.15), followed by “try harder” (mean = 2.68, s.d. = 1.20) and “feel smarter” (mean = 2.55, s.d. = 1.15). These rankings by mean scores were similar to the rankings when measuring agreement with the respective set of questions measuring student perceptions of least favorite professors’ effects on student outcomes.

Table 3. Means and Standard Deviations of How Participants Think and Feel about Their Least Favorite Professors

Teacher Quality	Mean	Standard Deviation
Expert in Field	3.33	(1.71)
Cares about Students	2.80	(1.13)
Entertaining	2.34	(1.25)
Has High Expectations	2.90	(1.20)
Strong Lecturer	2.78	(1.23)
Professor’s Effect on Students		
Feel Smarter	2.55	(1.15)
Learn More	2.53	(1.17)
Feel Respected	2.73	(1.15)
Receive Good Feedback	2.54	(1.16)
Try Harder	2.68	(1.20)

Participant responses were measured on a Likert scale where 1=completely disagree and 5=completely agree.

Analyzing for relationships between the questions measuring least favorite professor qualities and those measuring effect of least favorite professors, a linear correlation was conducted with the following results (see Table 4).

Table 4. Correlations between Five Teacher Qualities and Five Effects on Participants Related to Least Favorite Professors

Measures	1	2	3	4	5	6	7	8	9	10
1. Expertise	-									
2. Caring	0.53	-								
3. Entertaining	0.28	0.53	-							
4. Expectations	0.40	0.45	0.43	-						
5. Good Lecturer	0.50	0.52	0.46	0.52	-					
6. Feel Smarter	0.23	0.45	0.49	0.35	0.41	-				
7. Learn More	0.27	0.56	0.58	0.42	0.55	0.73	-			
8. Feel Respected	0.35	0.58	0.49	0.38	0.45	0.59	0.53	-		
9. Good Feedback	0.33	0.53	0.59	0.47	0.50	0.66	0.72	0.64	-	
10. Try Harder	0.35	0.47	0.51	0.44	0.51	0.55	0.64	0.53	0.62	-

Note. Participant responses were measured on a Likert scale with 1=completely disagree and 5=completely agree.

All p-values = < 0.05.

As seen in Table 4, questions measuring favorite teachers' qualities revealed a range of correlation coefficients with questions measuring student perceptions of least favorite teachers' affect on student outcomes (with correlation coefficients ranging from $r = 0.23$ to $r = 0.59$, $p < 0.05$). The strongest correlations were seen between entertaining and good feedback ($r = 0.59$, $p < 0.05$), entertaining and learn more ($r = 0.58$, $p < 0.05$), and caring and feel respected ($r = 0.58$, $p < 0.05$). Caring had the highest average correlation with student outcomes ($r_{ave} = 0.60$, $p < .05$). High expectations had the weakest average correlation with student outcomes ($r_{ave} = 0.45$, $p < .05$).

Qualities of the Least Favorite Professor

Student participants were also asked to name three qualities of their least favorite professor. Through open and selective coding, nine types of quality that students attributed to their least favorite professor were found: poor appearance, difficult, irresponsibility, unfriendliness, dullness, arrogance, lack of qualifications, communication issues, and positive qualities.

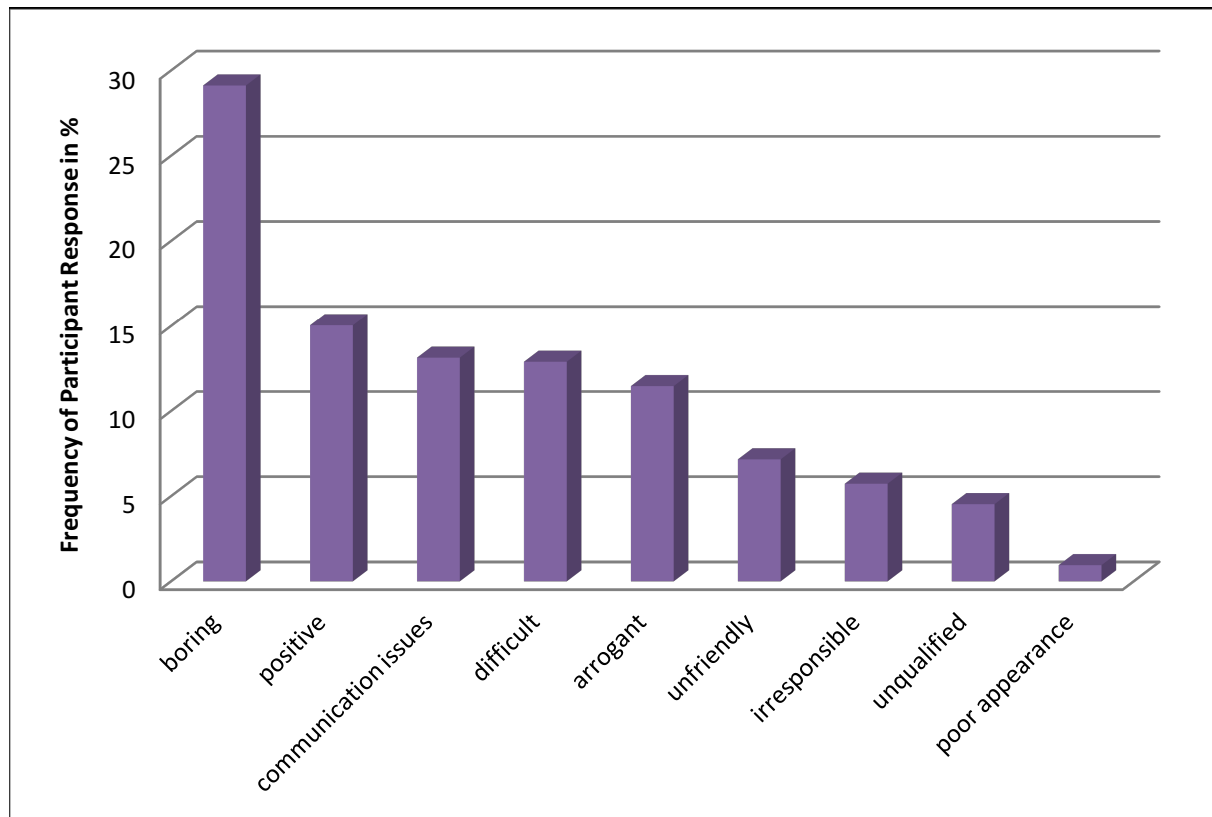


Figure 2. Percentage of all responses to the prompt, “Name three qualities of your favorite professor” ($N=164$).

When we aggregate all three responses from each student (see Figure 2), boring (29%) is the most common characteristic attributed to least favorite professors by our sample. Communications issues (13%), difficulty (13%), and arrogance (11%) were also common responses offered by students.

Comparing Favorite and Least Favorite Professors

On average, students agreed that their favorite professors possessed the five positive characteristics; at the same time, relatively few agreed that their least favorite professors possessed those same characteristics. Likewise, most students agreed that their favorite professors had effects on student outcomes, but the majority did not express agreement that their least favorite professors had a similar effect.

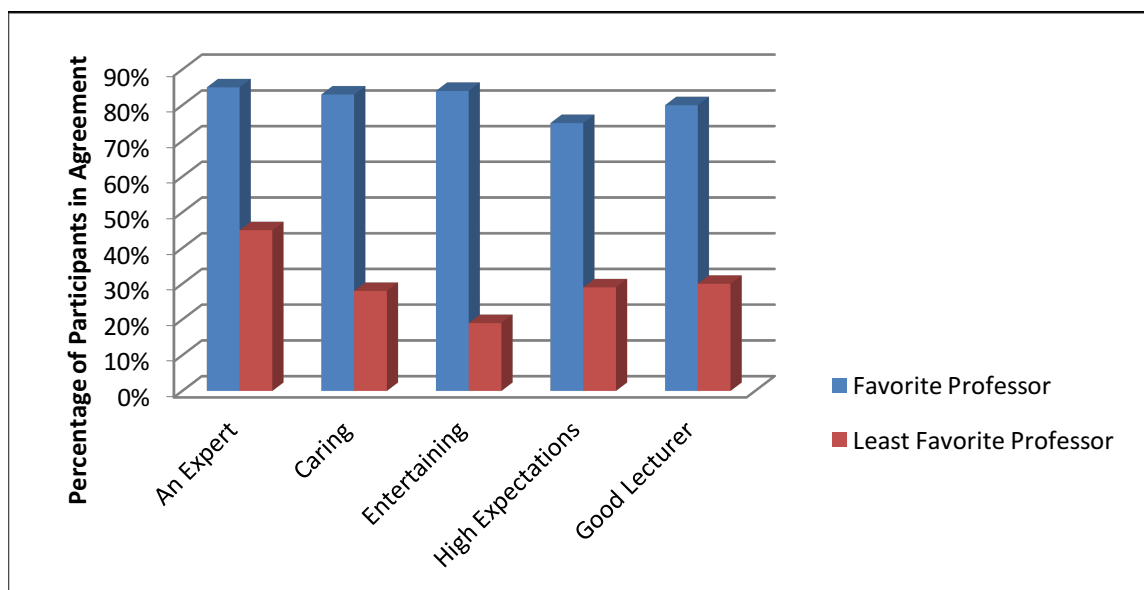


Figure 3. Percentage of participants in agreement or complete agreement with each of the five statements about the favorite and least favorite professors ($N = 209$).

As seen in Figure 3, there is a range, 40% to 65%, of gaps between characteristics of favorite and least favorite professors. The gap between favorite and least favorite professors is greatest in “entertaining” with a 65% difference. The characteristic with the smallest gap between favorite and least favorite professors is “expertise” with a 40% difference.

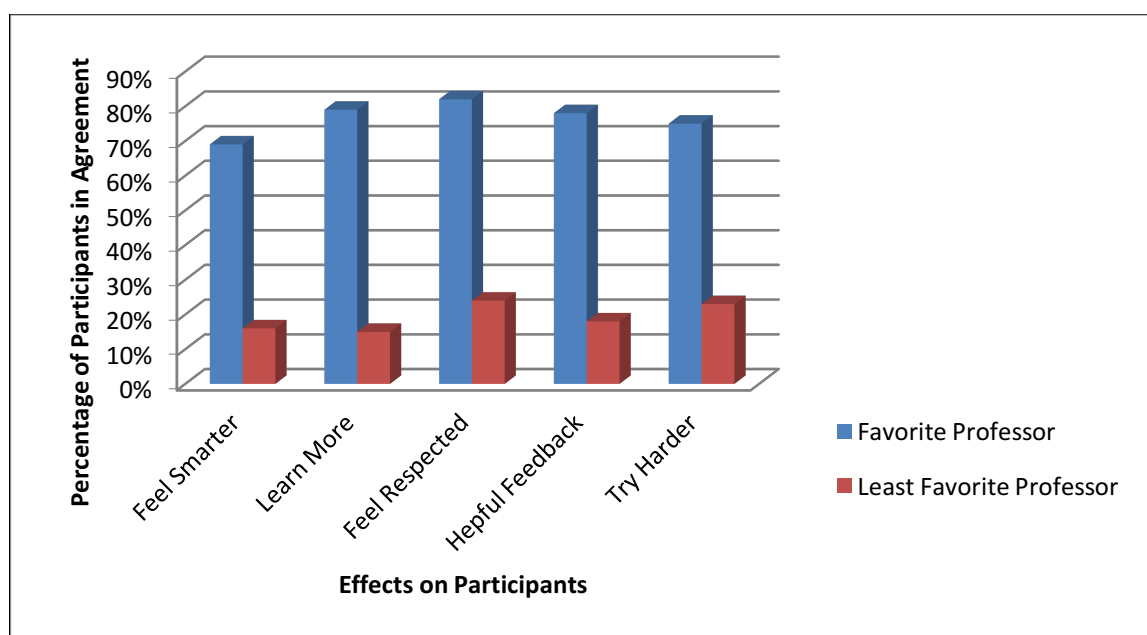


Figure 10. Percentage of participants in agreement or complete agreement with each of the five statements about favorite and least favorite professors’ effects on students ($N = 209$).

As seen in Figure 10, there is a 43% to 53% gap between the impact of favorite and least favorite professors. The gap between favorite and least favorite professors is greatest in “feel respected” with a 53% difference. The characteristic with the smallest gap between favorite and least favorite professors is “feel smarter” with a 43% difference.

Conclusions

Summary

This study examined Chinese university students' perceptions of their professors' characteristics. Students described their favorite professors as entertaining and caring experts in their field; these results were confirmed by both means of responses as well as frequencies of agreement. Similarly, two of those same characteristics were missing from students' descriptions of their least favorite professors: entertaining and caring; this was again confirmed by both means of responses as well as frequencies of agreement. Finally, when we examine responses to the open-ended question "Name three qualities of your favorite professor" we see further confirmation. The top three most frequently cited qualities of favorite professors were: relational (similar to caring), keeps student interest (similar to entertaining), and professional skill (similar to expertise). Chinese university students, in summation, value professors who are relational and caring, entertaining and interesting, skilled and experts.

We also examined how students believe their professors affect student outcomes. The results based on an analysis of means of responses as well as frequencies of agreement, indicate that professors influence students in divergent ways. Students expressed that they feel more respected, learn more and receive helpful feedback from their favorite professors. They do not express the same sentiment towards their least favorite professors, with the greatest difference in opinion in regards to feeling respected. In fact, every characteristic differed in agreement by at least 45%.

In this study, we sought out to examine the relationship between professors' characteristics and student outcomes. Though all professors' characteristics had moderate correlations with student outcomes, "caring" had the strongest correlations with student outcomes. "Feeling respected" had the strongest correlations with professors' characteristics.

Discussion

University students in China value many of the same characteristics that their peers all around the world do. They value professors that are entertaining, caring and experts in their fields. They expect these same professors to respect students, result in gains in student learning, and provide helpful feedback.

The data reiterates the importance of student-faculty interaction, relationships and rapport. Students also desire what previous studies have shown to be the characteristics of great teachers. As mentioned above, Miller's (1987) study demonstrated that great teachers have contagious enthusiasm and time for student questions and comments. They are encouraging, patient, and caring (Miller, 1987). Students identified similar characteristics as desirable in their professors. Enthusiasm, encouragement and care were all repeatedly listed by the participants as qualities of favorite professors.

Encouraging students, providing positive feedback, developing personal connections with students, and cultivating a positive environment in the classroom all positively and significantly affect student motivation (Hardre 2012; Hardre et al., 2009; Rugutt & Chemosit, 2009; Tam et al., 2009). The majority of students in our study desire professors who care about them, show an interest in them, and give feedback that can profitably influence their learning. When professors make their classes interesting and entertaining, it beneficially affects students' intrinsic motivation.

In addition to caring professors, those that were good lecturers and experts in their fields were highly correlated with increased student learning and student effort. These results confirm the findings of Foote et al. (2000) that demonstrate that students are motivated to learn when they have teachers who understand their subject matter and can make learning relevant. More often than not, educational rhetoric poses subject matter knowledge and pedagogy as the opposite poles of a stark dichotomy. Rather, our results illustrate the two working in tandem along with positive rapport with students.

Our conclusions are supported by additional qualitative data included at the end of the survey, where participants were told to finish the sentence, “I wish my university professor would...” Out of the 226 participants, 57% (N = 129) responded. Of those who gave a response, 30% (N = 68) of participants mentioned “fun,” “funny,” “humor,” “interesting,” or “entertaining.” For example, a 27-year-old male biology student stated, “I wish my university professor would be funny, knowledgeable and focus on the details of our class.” A 24-year-old male medical student, made the following statement, “I wish my university professor would be an expert in his or her field and organize the class very well... He should also be interesting.” Again, Chinese university students wanted professors who were interesting, entertaining and experts in their field. Several also desired interaction with their professors in and out of the classroom.

Despite these findings, many participants provided examples of extrinsic motivation in regards to their perceptions and expectations of their professors, confirming the findings of Pratt et al. (2009) and Rugutt and Chemosit (2009), who reported that many students are motivated extrinsically, for example through grades and test scores.

Limitations

Among the possible confounding variables and limitations, we highlight the following three: cultural and linguistic bias, leading questions, and subjectivity of qualitative coding. The surveys were distributed to Chinese university students in college-level English courses with the assumption of their English ability based on their enrolment in the courses. It must be noted, however, that it would be reasonable to expect some variability in English fluency and ability. If the survey had been translated into Chinese, some of these concerns would be mitigated. The likert scale questions, though based on the findings in the literature review, could lead to results that were self-fulfilling. As seen in the results for the likert scale questions, frequencies of agreement were uniformly high as were the correlation coefficients. In our study, we followed up with several open-ended questions which verified the results of our likert scale questions. Expanding the list of characteristics to 10 or more would have potentially provided greater variability in the results. The open-ended questions, although potentially more authentic and valid, were subjectively coded and categorized. Again, the qualitative coding process was systematic and informed by the literature review, but we admit the subjectivity of this approach. Additional coders, checking for coding consistency, may have increased the reliability of the data.

Implications

The extensions of this study are numerous and varied. Studies in other national and cultural contexts could be applied and those results could be compared to ours. Additional characteristics could be added so that a larger range of teacher qualities could be evaluated and correlated with student outcomes.

Admissions and recruiting offices would be advised to expand their application requirements so that candidates would provide evidence not only of pedagogical and subject matter expertise,

but in addition, demonstrate their capacity to develop rapport with students and their ability to make learning interesting and engaging, screening out those who lack those key qualifications. Pre- and in-service training may benefit from adding curriculum that develops compassion, care and interpersonal skills in addition to strategies for infusing fun, excitement and engagement into their pedagogy.

We believe that the question of what makes an exemplary teacher is one that must be continually and repeatedly asked. There are notions of teaching that persist through generations and across contexts, but at the same time, these characteristics are not static but vary in their appearance and outcomes. According to our data, exemplary teachers are those that care about students, make learning interesting, and possess expertise in their field. Just a few decades ago, expertise may have had greater prominence compared to caring and entertaining as characteristics of exemplary teachers. Most of us had a favorite teacher that stands out because of some set of traits or behaviors that impressed us, changed us, gave us a reason to learn. If nothing more, our data confirms the value of teachers and their impact on our lives.

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Japanese University Athletes' Dilemma: Study, Sport Performance, or Both

Yoshihiko Yamamoto

Abstract

The aims of this study were to investigate the Japanese university athletes' dilemma of managing both study and sport performance effectively, and to try to find answers to how they can effectively manage both their study and sport club activities. Questionnaires were used in order to collect the data (1st year, 2nd year and 3rd year students). A total of 216 responses were collected. All participants of this study belonged to university sport clubs and they majored in sport and health science at a private university in Japan. The data were both quantitatively and qualitatively analyzed. The results of questionnaires found university athletes in this study showed two dilemmas. They were busy with their sport club activities and felt pressure to seriously participate in their club activities because they came to their university with a sport recommendation. In order to support university athletes, this study discusses three suggestions such as ensuring enough financial support for university athletes, promoting peer learning to university athletes, and collaborative work between university lecturers and sport club team coaches.

Keywords: university athletes; study and sport performance

Introduction

In Japan, some university sports such as baseball and marathon relay are very popular. Private universities in particular recruit high school athletes who are talented in sports to promote their universities. Some university athletes will become professionals after graduation and could earn more than enough money to support themselves. However, there are also many university athletes who do not become professionals and who will take other careers for their future life. The author of this study believes that a university is a place for students to have an opportunity for both learning what they are interested in and preparing for their future careers. Although both university and teaching staff try to do their best for the athletes, university athletes seem to have problems coping with both study and their sport club activities at the same time. The aims of this study were to investigate the university athletes' dilemma of managing both study and sport performance effectively, and to try to find answers of how they can effectively manage both their study and sport club activities. This study adopted both quantitative and qualitative approaches to analyze the data. There were 25 questions on the questionnaires for the participants of this study who were all majoring in sport and health science in a private university in Japan. All of them belonged to sport clubs. The two types of university athletes' dilemmas are: they are busy with their club activities and they feel pressure to participate in the activities. This article provides three recommendations to keep a balance between university athletes' study and sport performance. The first recommendation is to give enough financial support for university athletes. The second recommendation is to promote peer learning for university athletes. The last recommendation is collaboration between lecturers and sport club coaches for university athletes.

Literature Review

For many university athletes, having a balance of both study and practice time for their sport is not easy. In particular, Japanese university sport clubs are sometimes described as being like the military, since many of them have strict rules in their clubs. Often, first or second year students are required to do jobs such as cleaning their clubs, looking after their fields, and so forth after they finish their practice sessions. Normally Japanese first and second year students take more subjects at their universities each semester than third year and fourth year students. Thus, both first and second year students normally spend more time on both their club activities and study at their university. For example, Inoue, Kunikata, and Nomi (2011) reported that those who belong to sport clubs do not tend to take a break as efficiently as those who do not belong to university sport clubs. Those who belong to their sport clubs participate in their club activities straight after they finish their last class of the day on weekdays. Also, many of them have part time jobs on the days they do not have their club activities. As a result, those who belong to sport clubs find it difficult to take a break. Inoue et al. (2011) explained that Japanese university athletes were very busy and often physically tired because of their club activities.

However, there is a positive side to participating in sport clubs for university athletes. In Japan, it is believed that university athletes tend to have an advantage in obtaining future jobs after their graduation. For example, Kasai (2010) explains that those who belong to university sport clubs are believed to be mentally tough, to have good communication skills, and not to give up on things. Therefore, they tend to be preferred by companies. Matsushige (2005) points out some companies prefer those who are physically tough as their employees, to those who studied harder in the university. Ueno (2007) explains that university athletes often experience a lot of

hardships through their hard practice and competitions. University athletes often learn a lot of things through these experiences and will grow up as mature people. Many Japanese companies tend to prefer those who experience these hardships in their university life to those who do not experience hardships. As past studies above showed, belonging to university sport clubs might be advantageous for university athletes in obtaining a job after their graduation.

However, Hirano (2011) points out that belonging to a university sport club is not a great advantage for university athletes' employment. They also need to maintain better academic performance. In particular, Hirano (2011) explains that academic writing is the most important skill for university students for job seeking since they need to develop curricula vitae to apply for jobs. Ohtake and Sasaki (2009) explain that many Japanese companies now expect university students to have both academic knowledge and specialized skills for their jobs. In short, it is important for university athletes to succeed in both study at university and perform their sport at the same time.

Methodology

Participants

The participants of this study were majoring in sport and health science in one of the private universities in Japan. The total of 216 students (1st year, 2nd year and 3rd year students) who belonged to university sport clubs participated in this study.

Data collection

Questionnaires were implemented between October and November 2013 in the author's English classes with paper and pencil. The questionnaire contained 25 open-response questions asking for demographic and lifestyle information. All questions were asked in Japanese in order to make sure the participants understood all questions. The participants answered in Japanese, and then all questions and answers were translated into English from Japanese by the author. All questions are listed in the appendix.

Results

The data analysis resulted in 18 graphs and 5 tables to be explained. Each graph shows the number of student responses to each question. To start with, graph 1 and 2 show the results of Question 3: How many days do you have club activities per week? And Question 4: How long do you practice in your club on weekdays? (Figure 1 and 2).

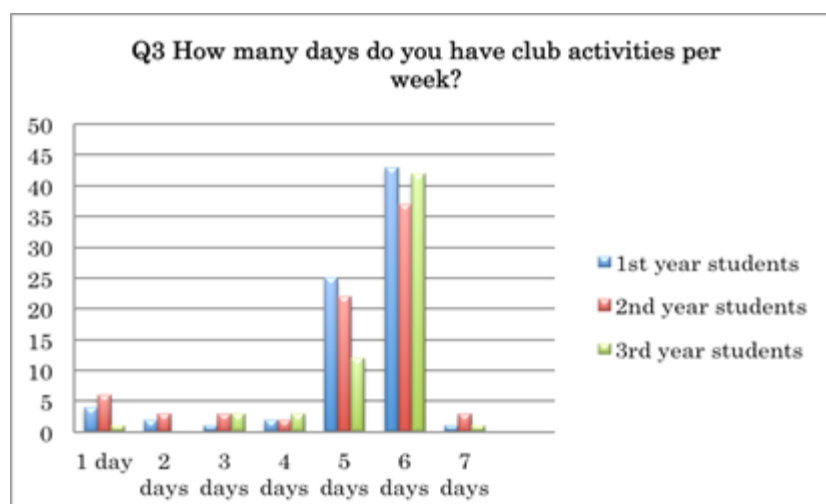


Figure 1. Graph showing how many students had had club activities 1-7 days per week

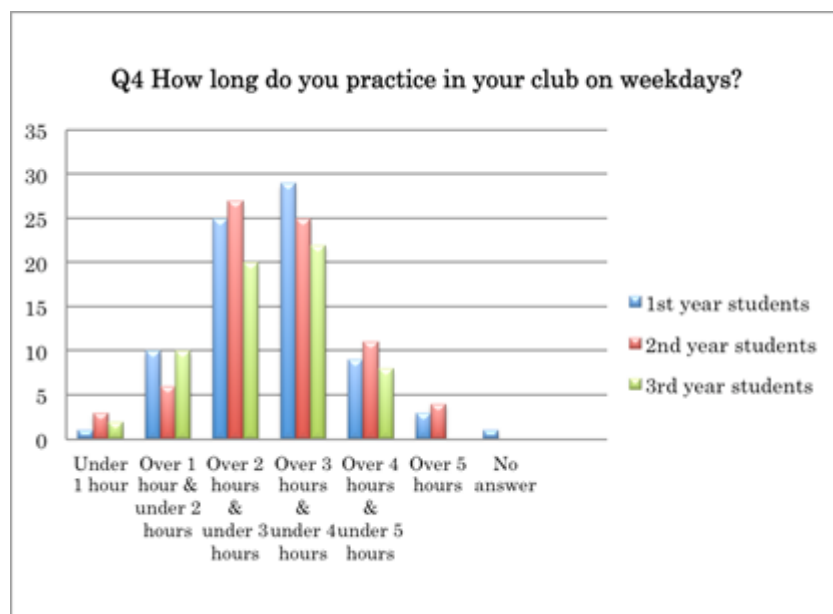


Figure 2. Graph showing how many students practiced for 1- 5 hours on weekdays

As Figure 1 shows, most university athletes had either five or six days of club activities. Figure 2 shows that most had over 2 hours or over 3 hours of practice each weekday. Some university athletes spent over four or five hours for their club activities on weekdays. Both Figures 1 and 2 illustrate the point that university athletes were very busy and did not tend to take a break because of their busy club activity schedule (Inoue et al, 2011).

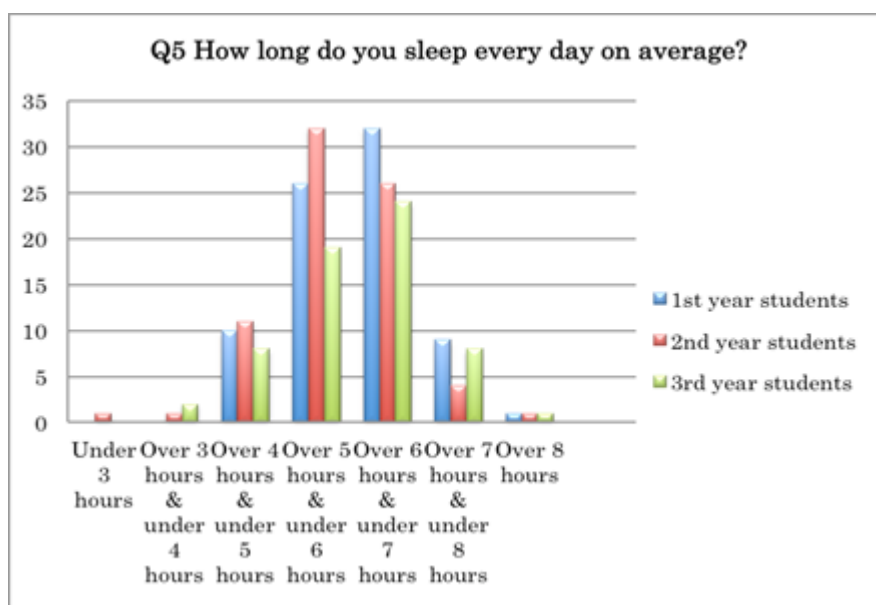


Figure 3. Graph showing how many students had an average of fewer than 3 to over eight hours of sleep per day

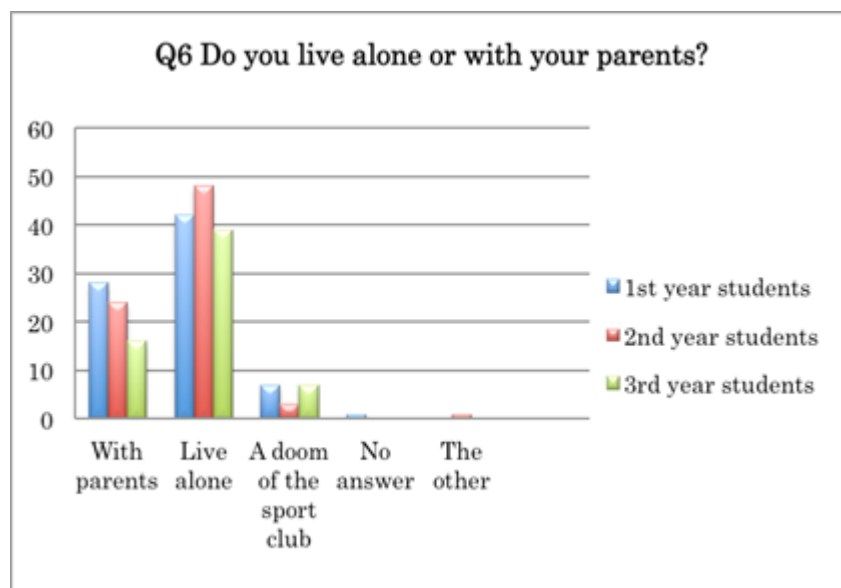


Figure 4. Graph showing how many students lived with parents, alone, at a dorm, or other

Figure 3 shows the average sleeping hours each day for university athletes. Most university athletes slept over five and under seven hours on average. Graph 4 shows the places where university athletes lived. Over half of the participants in this study lived alone (54% of the first year and 63% of both the second and third year). Around 30% lived with their parents (36% of the first year students, 32% of the second year students, and 26% of the third year students). Only around 10 % of university athletes stayed in their sport club accommodation (9% of the first year students, 4% of the second year students and 11% of the third year students).

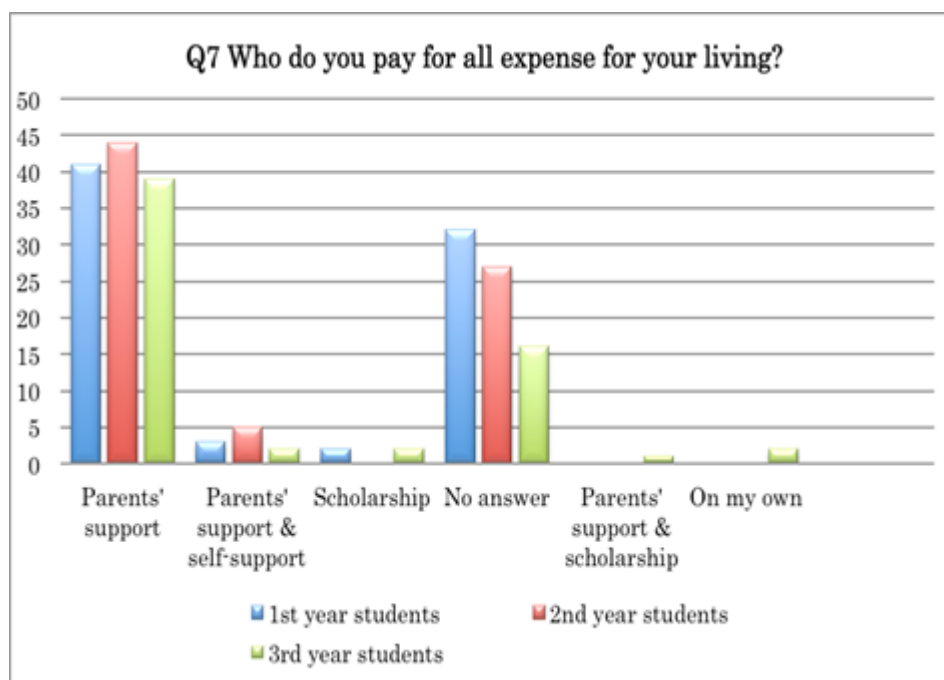


Figure 5. Graph showing how many students paid for their living expenses through parents, on their own, scholarship, or a combination

Figure 5 shows how university athletes paid for their living expenses. Over 50% of university athletes who lived independently relied on their parents' financial support (52% of the first year students, 58% of the second year students and 63% of the third year students). Only 3 %

of university athletes had scholarships to support their living expenses (3% of both the first and third year students). However, a number of students did not answer this question.

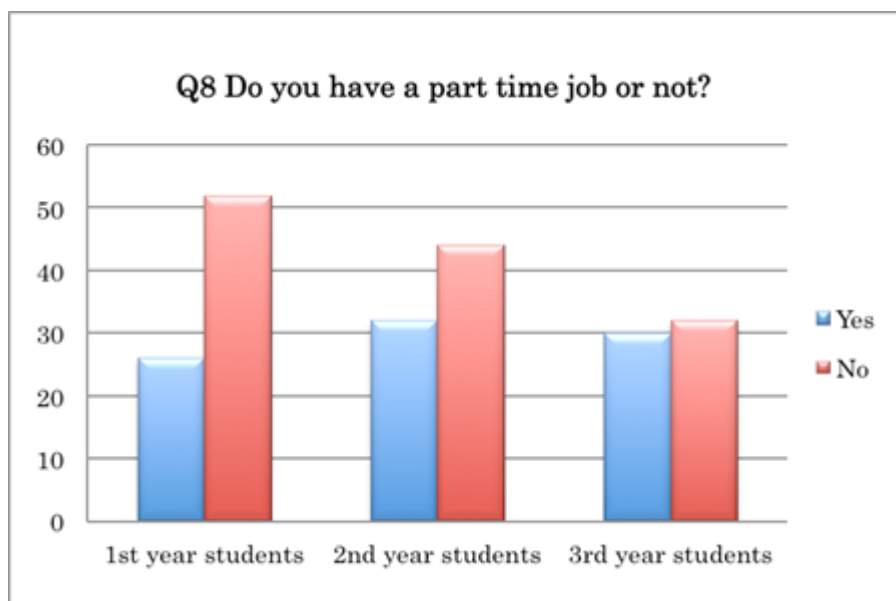


Figure 6. Graph showing how many students had part-time jobs

Figure 6 shows whether university athletes had part-time jobs or not. Over half of the participants in this study did not have part time jobs (67% of the first year students, 58% of the second year students, 52% of the third year students).

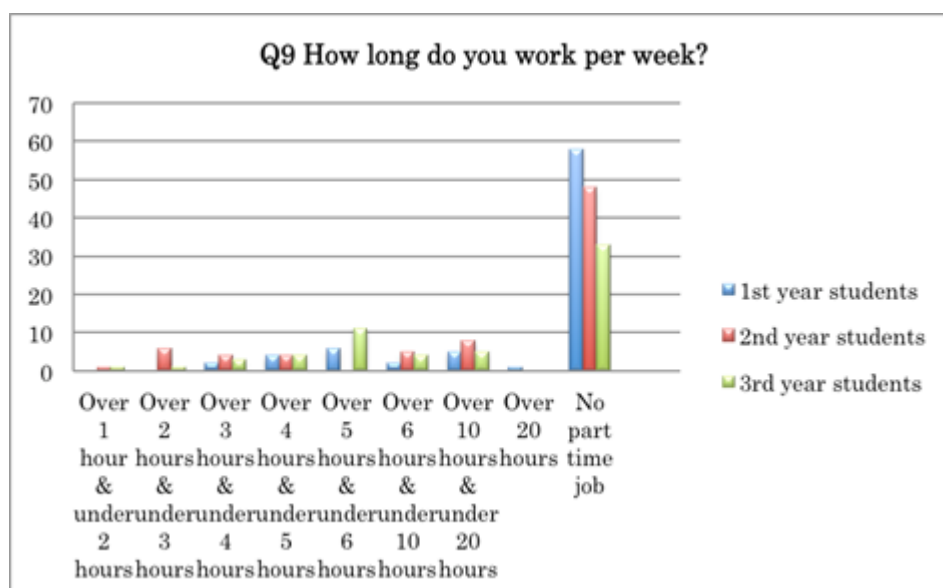


Figure 7. Graph showing how many students worked over one hour to over 20 hours per week

Figure 7 shows the working hours of those who had part time jobs. The result shows various working hours. Some worked only between one and two hours, but others worked over ten hours per week. Most university athletes in this study did not have part time jobs.

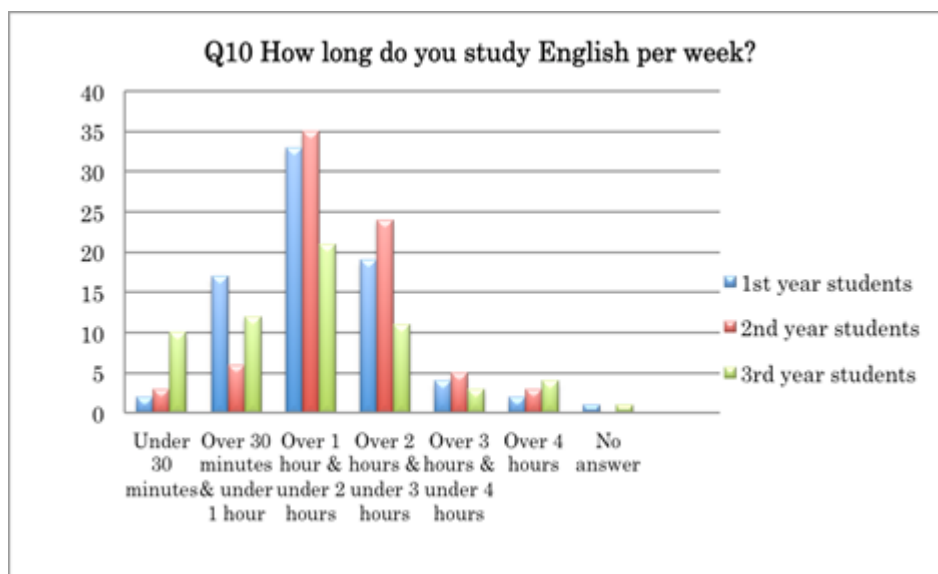


Table 8. Graph showing how many students studied English under 30 minutes to over 4 hours per week

Table 8 shows the study time of university athletes. As the author of this study teaches English, the study time for English was included in the questionnaire. Most students studied between one and two hours per week (42% of the first year students, 46% of the second year students and 34% of the third year students). Many students also studied between two and three hours (24% of the first year students, 31% of the second year students and 18% of the third year students).

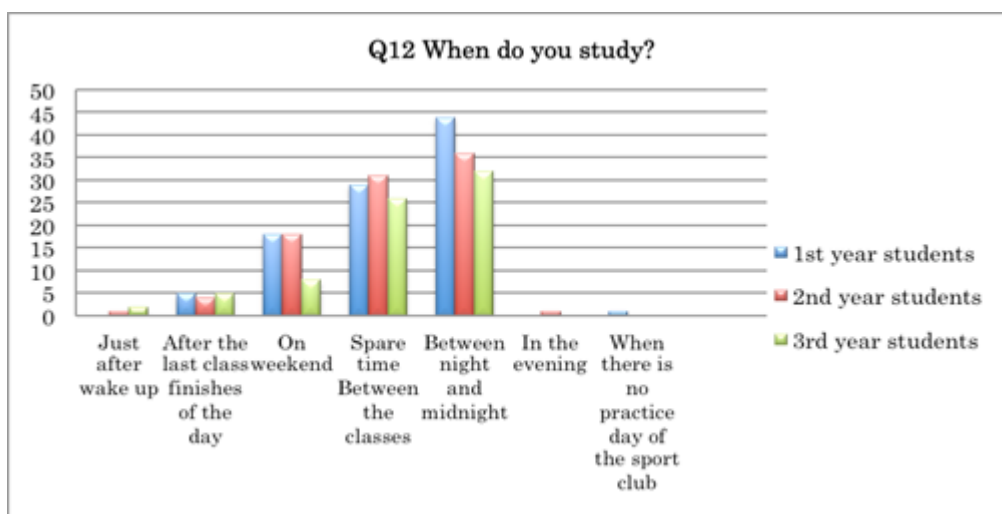


Figure 9. Graph showing how many students studied during various time periods throughout the day

Figure 9 shows when university athletes studied. Over 40% of the participants in this study studied between night and midnight (45% of the first year students, 40% of the second year students and 44% of the third year students). Interestingly, over 30% of the participants used their spare time between their classes (30% of the first year students, 34% of the second year students and 35% of the third year students).

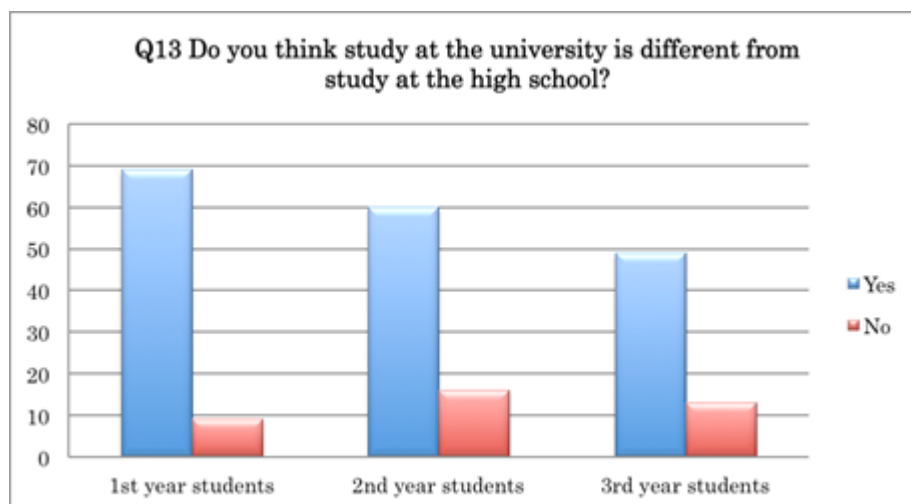


Figure 10. Graph showing how many students thought study at the university was different from study at high school

Figure 10 shows whether participants in this study found study at university different from study at high school. Nearly 80% of participants in this study found it different (88% of the first year students, 79% of the second year students and 79% of the third year students). The first year students found that study at the university was different from study at high school more than both the second and third year students. Both the second and third year students have been at university longer than the first year students. Thus both the second and third year students were more familiar with study at university than the first year students.

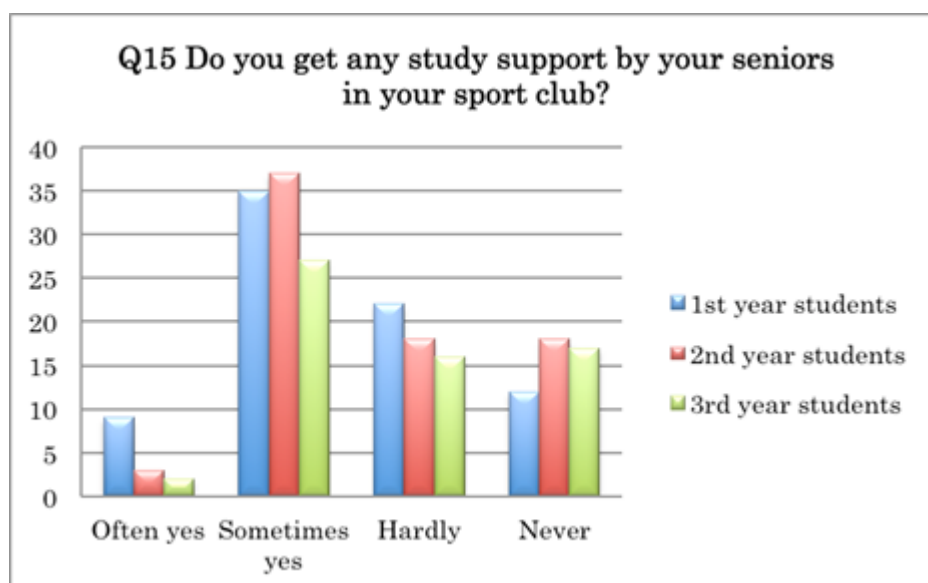


Figure 11. Graph showing how many students received study support by more senior members of their sport club

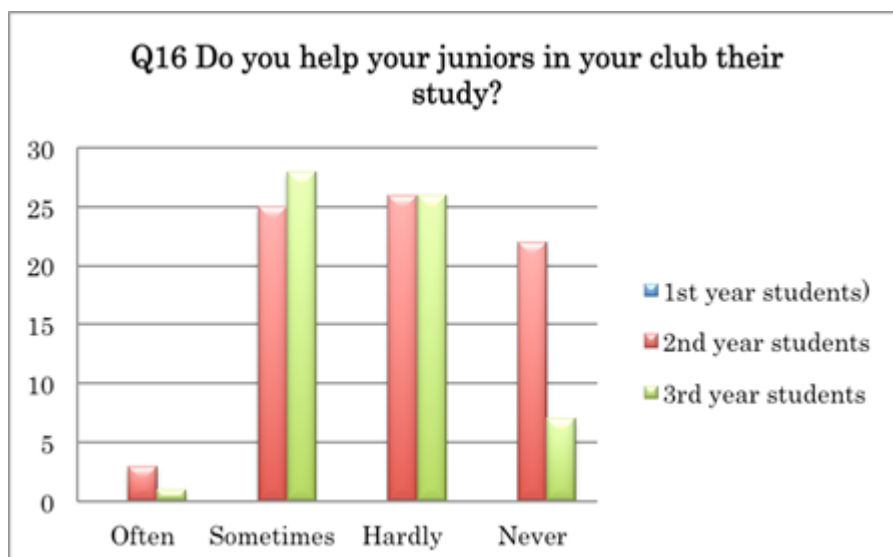


Figure 12. Graph showing how many of the more senior students helped junior members of their sport club with their study

Both Figures 11 and 12 show whether university athletes helped each other with study. As graph 11 shows, nearly 50% of participants of this study, indicated “often” and “sometimes” for their support of each other (57% of the first year students, 52% of the second year students, and 47% of the third year students). However, nearly another 50% of the participants did not support each other, and indicated “hardly” and “never” (42% of the first year students, 48% of the second year students and 53% of the third year students).

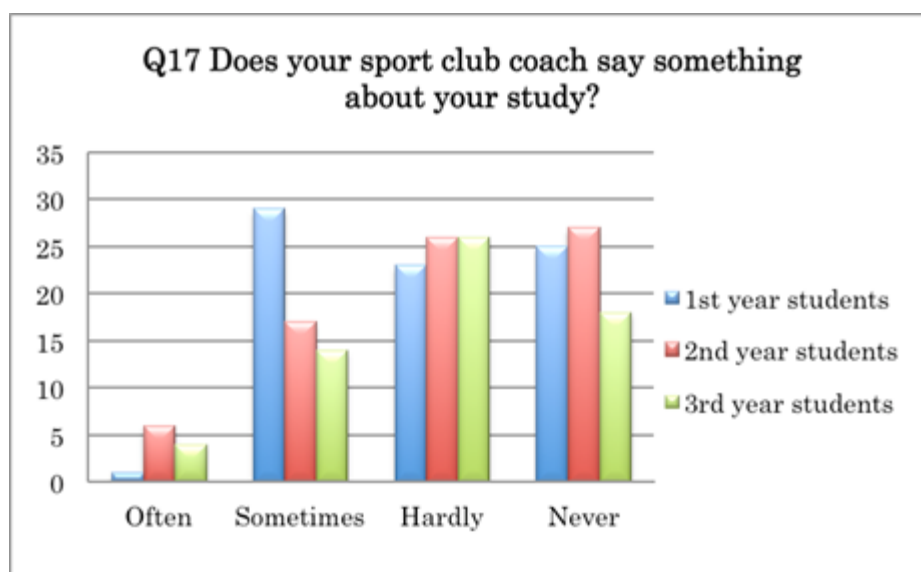


Figure 13. Graph showing how many students indicated that the sport coach said something about the university athlete’s study

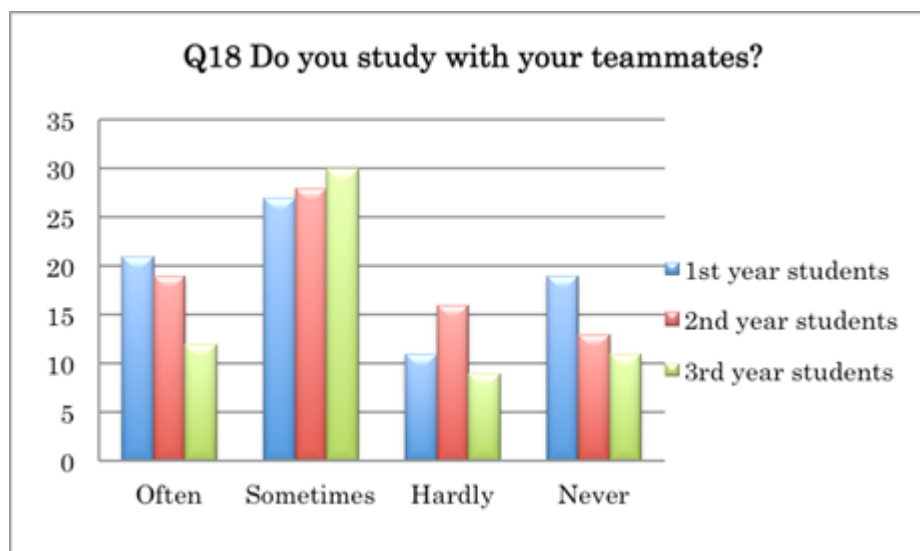


Figure 14. Graph showing how many students studied with their teammates

Figure 13 shows whether or not the sport coach said something about the university athlete's study at the university. Over 60% of the participants answered either hardly or never (62% of the first year students, 70% of the second year students and 71% of the third year students). Figure 14 shows whether or not participants studied together with their teammates. Over 60% of the participants did study together with their teammates (62% of both the first year and the second year student, and 67% of the third year students).

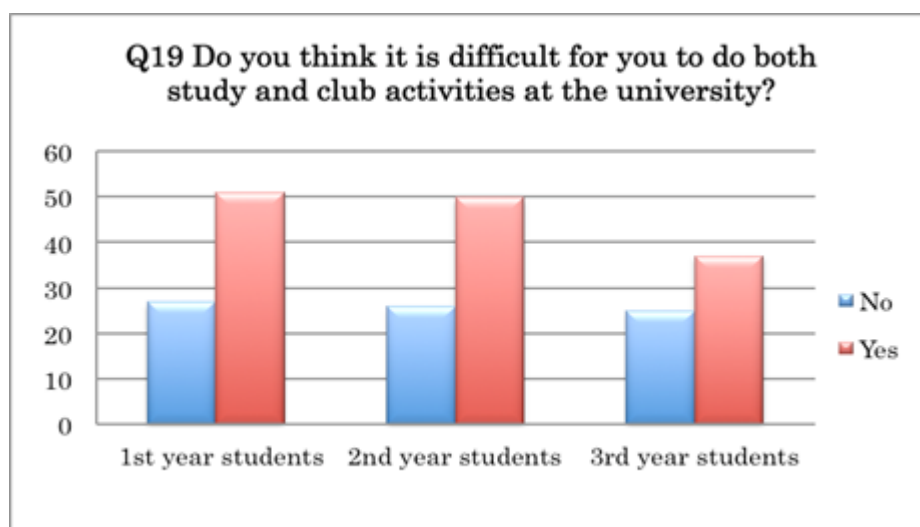


Figure 15. Graph showing how many students thought doing both club activities and studying was difficult

In Figure 15, over 60% of participants of this study thought doing both club activities and study was difficult (65% of the first year students, 66% of the second year students, and 60% of the third year students). About 30% of participants of this study did not think it so.

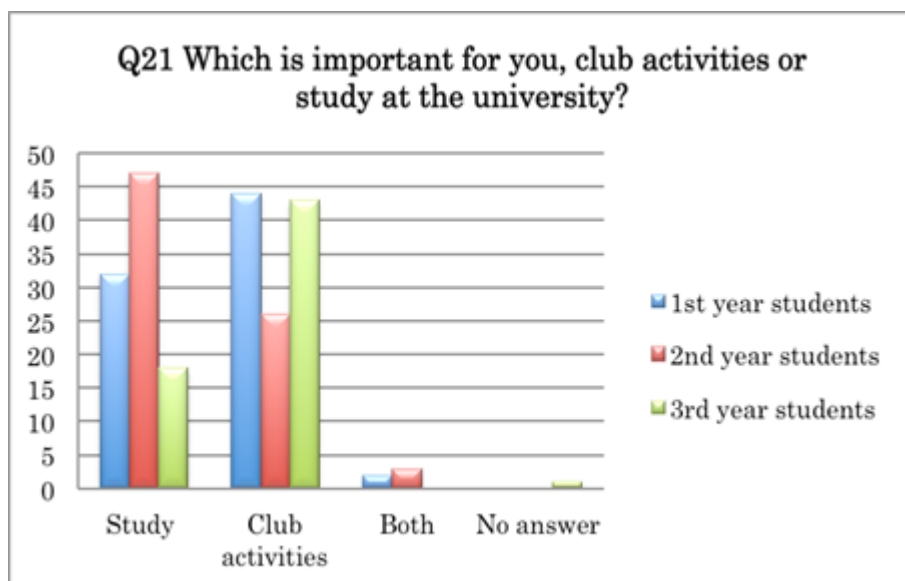


Figure 16. Graph showing how many students thought club activities or study were important to them

In Figure 16, interestingly, both the first year students (56%) and the third year students (69%) answered that their club activities were more important than their study. However, 52% of the second year students answered their study was more important than their club activities. Only 30% of second year students answered their club activities were more important than their study. Only 3% of first year and 4% of second year students answered that both study and club activities were important in their university life.

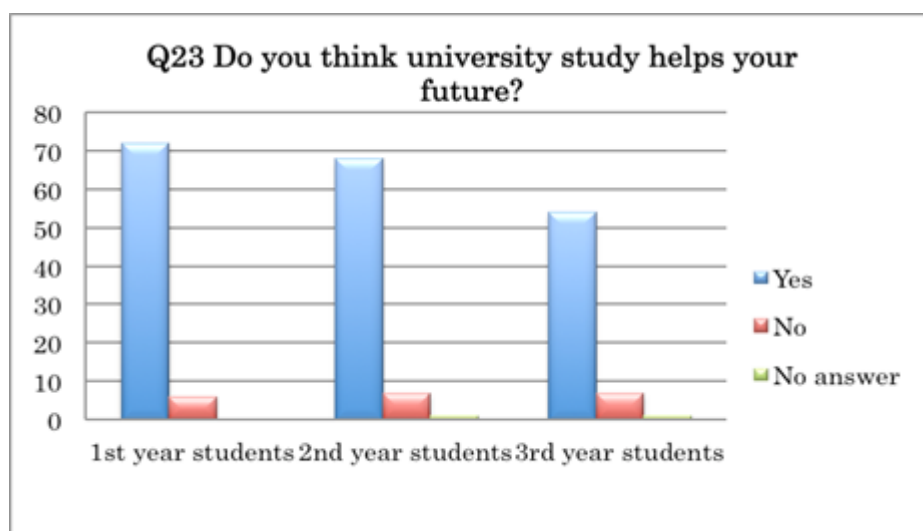


Figure 17. Graph showing how many students thought that university study would help their future

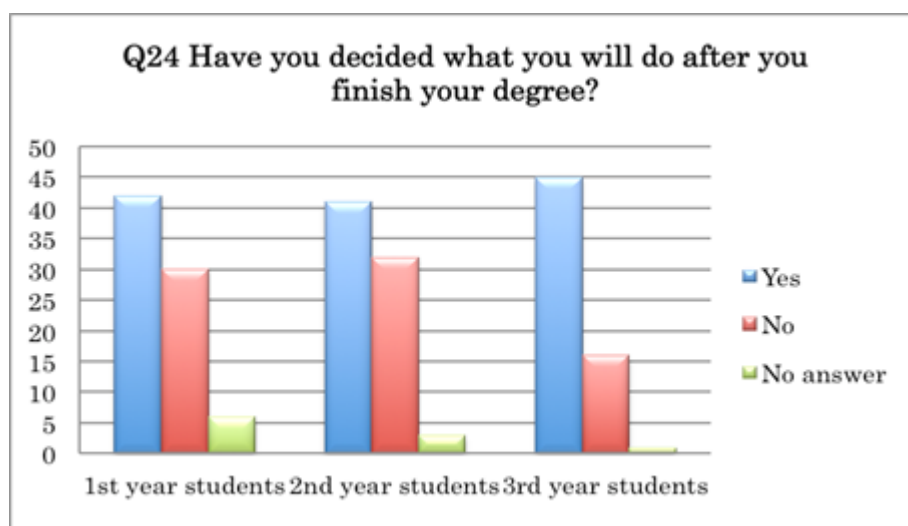


Figure 18. Graph showing how many students had decided what they would do after finishing their degree

In Figure 17, nearly 90% of participants of this study thought university study would help their future. Figure 18 shows whether or not participants of this study had already decided their future. Interestingly, 72% of the third year students had already decided their future, while 54% of both the first and second year students had decided.

There are five tables below which show university athletes' reasons given for Question 14, how study at the university is different than study at high school (Table 1), Question 20, the most difficult thing about studying with sport club activities (Table 2), Question 21, why studying is important and club activities are important (Tables 3 and 4), and Question 25, what kind of plans after graduation the participants of this study had (Table 5).

Table 1. Number of students who gave particular reasons for thinking university and high school study are different.

Q 14 Please write how exactly different [study at the university is from study at high school]	1st year students	2nd year students	3rd year students	Total
Increase of self-study time	5	3	2	10
Learner centered style classes	16	4	16	36
Increase in writing reports instead of exams	2		2	4
Increase of research & giving opinions	5	6		11
Increase of using PC	5	6	2	13
There is no one correct answer but we need to find our opinions	6		8	14
Contents of classes are specialized in the area	9		3	12
There is much homework	1	10	1	12
There is more free time between classes	2	2	3	7
There are deadlines to submit reports		2	1	3

Table 1 shows the answers for Question 14. The most popular answer (N = 36) was that university classes were learner-centered style classes. The next popular answer (N = 14) was that they found there was no one correct answer but they needed to try to find their opinions in classes. Then “using a PC” (N = 13), “much homework” (N = 12), “learning specialized in the area” (N = 12) and “increase of research and giving opinions” (N = 11), “increase of self-study time” (N = 10).

Table 2. Number of students who gave particular difficulties with studying

Q 20 What is the most difficult thing for you to do both study and club activities at the university?	1st year students	2nd year students	3rd year students	Total
I don't have enough time to study because of my club activities	4	25	15	44
Lack of sleep	29	14	17	60
I am physically too tired to study	28	38	30	96
Lack of concentration in class	4	6	3	13
Miss the class due to club activities	3	2	2	7

Table 2 shows the results of Question 20. 44% (N = 96) of the participants answered that they were physically too tired to study because of their club activities. In addition, 27% (N = 60) of the participants answered lack of sleep. Then 20% (N = 44) of the participants answered they did not have enough time to study because of their club activities. As Table 2 shows, over 70% of the participants found that their club activities negatively affected their study.

Table 3. Number of students who gave particular reasons for thinking sport club activities are important

Q 22 Why do you think it so? [Club activities are important]	1st year students	2nd year students	3rd year students	Total
Because I entered this university with a sport recommendation	9	10	9	28
I think I can do my sport while I am a university student. I don't think I'll have time to do it after I work.	8	6	11	25
I want to get a job doing something with my sport which I am playing now.	4		1	5
I want to be a professional sport player in the future.	2			2
I don't think I want to be a professional but I want to try my best for my sport now.	2	3	6	11
I love my sport.	8	2	2	12
I think sport club activities are more useful than study at university for the future.		1		1
I learn many things from sport club activities.			1	1
I enjoy communication with my teammates.			1	1

Table 3 shows reasons from those who answered “club activities” for Question 21 (Which is important for you, club activities or study at the university?). The most popular answers were “because I entered this university with sport recommendation” (N = 28) and “I think I can do

my sport while I am a university student. I don't think I'll have time to do it after I work" (N = 25). Then "I love my sport" (N = 12) and "I don't think I want to be a professional but I want to try my best for my sport now" (N = 11).

Table 4. Number of students who gave particular reasons why study is important at university

Q 22 Why do you think it so? (Study at a university is important)	1st year students	2nd year students	3rd year students	Total
University is the place to study.	14	9	9	32
Study helps my future.	9	16	6	31
I don't think I can make a living with my sport in the future.	1	3		4
I must study to participate in my sport club activities because of rules of the department policy.	6	2		8
I want to get a degree.	2	5	3	10
I like study.		3		3

Table 4 shows the answers for Question 21 from those who answered "Study at a university." 36% (N = 32) of the participants answered "university is the place to study" and 35% (N = 31) of the participants answered "study helps my future." 11% (N = 10) answered "I want to get a degree." Over 70% of the participants saw study at a university positively, as the first two reasons in the Table 4 show.

Table 5. Number of students who gave particular goals for what they will do after finishing their degree

Q 25: Please tell me what it is [that you will do after you finish your degree]	1st year students	2nd year students	3rd year students	Total
I want to get a job in a company and keep doing my sport as my hobby	5	6	16	27
I want to be a public servant and keep doing my sport as a hobby.	7	5	2	14
I want to be a PE teacher at school	2	2		4
I want to work for a company as a contract professional sport player.	4	6	3	13
I want to be a full time professional sport player.	5		3	8
I will study at a graduate school and keep doing my sport there	1	3		4
I will study at a graduate school and I will retire from my sport	1			1
I will retire from my sport after graduation and I will get a permanent job at a company	8	9	13	30
I want to be a fulltime coach for my sport	8	12	6	26

Table 5 shows the answers for the participants' future careers. 24% (N = 30) of the participants answered, "I will retire from my sport after graduation and I will get a permanent job at a company." Then 21% (N = 27) of the participants answered, "I want to get a job in a company and keep doing my sport as my hobby." Another 21% (N = 26) answered, "I want to be a full time coach for my sport." On the other hand, only 6% (N = 8) answered, "I want to be a full

time professional sport player.” 10% (N = 13) of the participants answered “I want to work for a company as a contract professional sport player.” In Japan, sports which are very popular such as baseball and soccer have their professional leagues. When professional players in these leagues succeed in their careers, they are able to earn multi-million dollars. However, sports which are considered as minor sports such as canoe, lacrosse, field hockey, and so forth, are not often able to have professional leagues for financial reasons. Thus, players of these sports often belong to teams owned by companies and they make contracts with their teams to play and work for them.

Discussions

University Athletes' Dilemmas

The aims of this study were to investigate university athletes' dilemma of managing both study and sport performance effectively, and to find answers for how university athletes could effectively manage both their study and sport club activities. First of all, this study found similar results to the point raised by Inoue et al., (2011). Based on the results in Figures 1, 2, and 6, university athletes in this study tended to be very busy for their club activities. Because many of them participated in their club activities almost every day and spent between two and four hours almost every day, they did not tend to have enough sleep hours. Moreover, as Figure 15 showed, over 60% of participants of this study admitted that they found it difficult to do well on both club activities and study at the university. These results indicate that club activities had a negative effect on university athletes' study in either being physically too tired or lacking sleep time. However, as Figure 17 shows, about 90% of the participants in this study admitted that study at the university would help their future. Thus, many university athletes in this study were motivated to study but they were less likely to be sure how to find time for study.

Another dilemma of university athletes in this study was found. Some university athletes felt pressure to be seriously involved in club activities because they came to the university with their sport recommendation. As both Tables 3 and 5 show, many university athletes of this study did not aim to be professional sport players after their graduation. However, because of entering the university with the sport recommendation, university athletes felt a strong responsibility to seriously participate in their club activities. This pressure possibly results in one of the Japanese traditional values regarding the school sport environment. Tobashima and Ebishima (2011) explain that a part of the Japanese education system encourages both types of extreme students, such as those who try to focus on sport activities with less study, and those who try to study hard with almost no sport activities. Under such an educational environment, sport students in particular tend to lose their motivation to study and also take a risk regarding future employment if they fail to become professional athletes. As opposed to Tobashima and Ebishima's study (2011), university athletes in this study showed that study at university was important for their future as Figure 17 shows. However, many university athletes, in particular those who came to the university with their sport recommendation, retain a strong responsibility to seriously participate in their sport club.

Financial Support is Important for University Athletes

Two university athletes' dilemmas were found in this study. This study proposes how university athletes can manage these dilemmas. First, to keep a balance of both study and sport club activities for university athletes, financial support is important for them. As Figure 6 shows, over the half of university athletes in this study did not have part time jobs. This is because university athletes in this study were busy with their club activities as shown in Figure 1, 2, and 6. They did not have time to do part-time work. In addition, as Figure 4 shows, around

30% of university athletes in this study lived with their parents and as Figure 5 shows, over 50% of university athletes in this study who lived alone relied on financial support from their parents. These results prove that university athletes in this study do not tend to have enough time to earn money to financially support themselves. These results also show that university athletes in this study need to heavily rely on their parents' financial support to keep a balance of both study and club activities.

Peer Learning to Succeed

To support university athletes in order to succeed in both study and sport performance, peer learning is key. In this study, there were some university athletes who studied together with either their teammates or their seniors in their sport clubs as the both Figures 11 and 14 show. Around 50% to 60 % of the university athletes studied with their teammates or with senior members of their sport clubs. Students often work in small group in classes as well. For example, Sugino (1994) explains that group work facilitates learners' abilities in language and Johnson et al. (2001) explains that group work results in higher productivity and higher educational achievement when group work is effectively used. Some participants in this study effectively used study in small groups to manage both club activities and study. Thus, promoting effective peer learning skills with university athletes is a key for their success in both study and club activities in the university. The author believes that it is important for lecturers to encourage university athletes to study together with others in and out of classes.

Collaborative Work between Lecturers and Sport Coaches

The third key for university athletes to succeed in both study and sport performance is collaborative work between lecturers and sport coaches. The author believes that it is important for both university lecturers and sport club coaches to collaborate with each other to support university athletes. In Japanese universities, lecturers are not often involved in club activities. Nakazawa (2011) explains that university lecturers are often too busy with their work and they do not normally have time to look after university clubs. In order to solve this problem, many universities employ sport coaches for sport clubs who mainly look after their sport clubs. In addition, sport coaches often do not involve themselves in university study. They focus on looking after the university athletes' sport performance. As Figure 13 shows, in this study sport club coaches did not tend to support university athletes' study well. There was not much collaborative work between lecturers and sport coaches to support university athletes. The author of this study believes that coaches play an important role in university athletes' academic results. According to Bell (2009), in America, university sport coaches are required by the NCAA to look after university athletes on both sport and study. Bell (2009) explains that sport coaches tend to explain how important university study is in university athletes' futures. Such sport coaches' involvement in university athletes' study contributes to retaining a high graduation rate in the USA. The results of this study show that both lecturers and sport coaches in Japan do not tend to collaborate with each other to support university athletes in order to do well in both their study and sports. Thus, in order to solve this issue, it is important for both lecturers and sport coaches to communicate with each other and collaboratively support university athletes.

Conclusion

This study investigated university athletes' dilemma of managing both study and sport performance effectively, and to tried to find answers for how they could effectively manage both their study and sport club activities. This study found that many university athletes had dilemmas. Firstly, university athletes in this study tended to be very busy for their club

activities and they found it difficult to keep a balance between both study and their club activities. Secondly, they felt pressure to be seriously involved in their club activities because they came to the university with their sport recommendation. However, many university athletes in this study admitted that study at the university helped their future and it was important for them. Thus, they were motivated to study. In order to succeed in both study and their sport club activities, this study offers three recommendations. First, university athletes need to have enough financial support in order to keep a balance on both study and their sport performance. As this study showed, university athletes were busy with their sport club activities and they needed to study. Thus they did not have time for part-time work to support themselves. Second, peer learning would help university athletes to study. Some university athletes in this study used it effectively with their teammates and senior members of their sport clubs. Third, it is important to develop collaboration between university lecturers and sport club coaches for university athletes. As Bell's study (2009) pointed out, sport club coaches' active involvement in the university athletes' study enhanced athletes' academic performance. Also, lecturers' active support for university athletes would help university athletes to keep a balance of both study and sport performance. This study was limited to exploring university athletes in one of the private universities in Japan. In order to improve the quality of this research, this study could have included university athletes in either national or public universities in Japan to compare the results.

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Appendix

Questions which were used in this study:

- Q 1: What year are you in?
- Q 2: Are you a man or woman?
- Q 3: How many days do you have club activities per week?
- Q 4: How long do you practice in your club on weekdays?
- Q 5: How long do you sleep every day on average?
- Q 6: Do you live alone or with your parents?
- Q 7: Who pays for all expense for your living?
- Q 8: Do you have a part time job or not?
- Q 9: How long do you work per week?
- Q 10: How long do you study English per week?
- Q 11: Where do you normally study?
- Q 12: When do you study?
- Q 13: Do you think study at the university is different from study at the high school?
- Q 14: How different is it?
- Q 15: Do you get any study support by senior members in your sport club?
- Q 16: Do you help junior members in your club to study?
- Q 17: Does your sport club coach say something about your study?
- Q 18: Do you study with your teammates?
- Q 19: Do you think it is difficult for you to do both study and club activities at the university?
- Q 20: What is the most difficult thing for you in doing both study and club activities at the university?
- Q 21: Which is important for you, club activities or study at the university?
- Q 22: Why do you think it so?
- Q 23: Do you think university study helps your future?
- Q 24: Have you decided what you will do after you finish your degree?
- Q 25: Please tell me what it is.

Guide for Authors

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A concise and factual abstract is required (maximum length of **250 words**). The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

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Immediately after the abstract, provide a maximum of **6 keywords**.

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Present purposes of the study and provide background for your work.

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If there is more than one appendix, they should be identified as A, B, etc.

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Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

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