

INVESTIGATION OF READING OBSTACLES AND PROGRESS: A CASE STUDY OF A LESS PROFICIENT EFL LEARNER IN TAIWA

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ABSTRACT

This paper reports a case study from a longitudinal qualitative research project which investigated Taiwanese university students' EFL reading through the use of western children's literature. Focusing on the progress of one of the less proficient EFL learners among the 17 participating sophomores, the report aims to identify key obstacles this EFL learner faced while reading. Sources of data included audio recording of reading sessions, oral reading of texts, interviews, and classroom observations. During the school year, 6 one-on-one reading sessions, each of which lasted 30 to 40 minutes, were held for the learner to read the self-selected children's books aloud and for the instructor to provide feedback and guidance based on the learner's oral reading and reading comprehension. Data from the reading sessions was further analyzed in terms of oral reading fluency, mispronunciation patterns, and comprehension obstacles. Results of the reading sessions showed that the learner (1) improved the oral reading fluency, (2) gradually developed conscious awareness of the pronunciation errors and thus increased self-correction rates of oral miscues, and (3) progressively acquired better competence to apply the reading comprehension techniques taught by the instructor. These findings and corresponding pedagogical implications for EFL reading instruction are discussed and further research suggestions are made.

Keywords: comprehension obstacles, less proficient EFL learner, oral reading.

INTRODUCTION

The importance of reading in EFL learning cannot be overemphasized. Mori (1999) studied the reading habits of university students and found that the concern of grades, followed by the fact that they liked the material or not, was the most prominent factor which greatly affected the amount of reading students would engage in. To enhance language learners' motivation to read in the L2, Leung (2002) suggested educators to provide interesting materials at an appropriate level of difficulty. These two points corresponded to the fundamental elements in pleasure hypothesis (Krashen, 2004) and input hypothesis (Krashen, 1985). Krashen's (2004) pleasure hypothesis proposed that educational activities which help language acquisition are those that are enjoyable. In addition, language learners would better acquire languages by comprehending the input message in a lower anxiety context (Krashen, 1989). Specifically, the more comprehensible aural and written input is provided, the more language acquisition occurs. Research evidence showed that when unknown word densities exceeded 5%, reading became strenuous and

comprehension suffered (Laufer, 1989). In many extensive reading programs supporting Krashen's hypothesis, L2 learners choose reading materials that are interesting to them and are at appropriate comprehension level for them.

Krashen (1989, 2004) and supporters have asserted that reading freely and extensively is a key factor contributing to language development for both L1 and L2 readers. Krashen (1993) further argued that comprehensible input accompanied with incidental learning sufficiently facilitate the improved L2 proficiency in various areas. Promising learning benefits for L2 learners were shown on various aspects including vocabulary acquisition (Nation, 2001), reading comprehension (Bell, 2001), reading fluency (Bell, 2001; Kusanagi, 2004), the development of good reading habits (Nash & Yuan, 1992), and writing ability (Hafiz & Tudor, 1990; Krashen, 1989; Tsang, 1996). In addition, students' confidence and motivation as L2 readers were raised (Day & Bamford, 1998; Mason & Krashen, 1997). In contrast, Cobb (2008) pointed out that "the adequacy of free reading is an idea with high credibility in the time frame of L1 acquisition, and some credibility in an extended time frame of L2 acquisition under conditions of exceptional motivation. But carried into the typical time frame of instructed L2 acquisition, it is an idea that grossly misrepresents the problems faced by L2 readers who need to read to learn in their second languages. For these learners, an adequate second lexicon will not happen by itself; it will be provisioned through well-designed instruction including but not limited to reading. (pp. 113)" Similarly, Norris and Ortega (2000) studied the effects of various types of instructions and concluded that explicit instruction is more efficient than implicit instruction to facilitate L2 acquisition.

BACKGROUND OF THE RESEARCH

As Arden-Close (1999) pointed out, many Taiwanese university students associated English reading with gaining vocabulary and learning important grammar patterns to pass exams. Such perception could be attributed to the exam-oriented English classes in their high school years. Many high school teachers viewed one of their key missions in terms of reading instruction as to expand students' vocabulary to help them pass the joint college entrance exam. Students were trained to memorize long and difficult vocabulary and to read very fast in order to answer the test items. Once they get into college, this test-driven attitude toward reading is reinforced as one of the graduation requirements of most colleges is to pass the CEFR B1 level of an English proficiency test. Oftentimes, the out-of-class reading that students engaged in, if any, involves mostly English studying magazines and self-study books for TOEIC/TOEFL vocabulary. Such phenomenon was prominent in the private university this research took place.

To encourage reading instead of studying English to pass a reading test, students were informed of the opportunity to gain bonus points for the required EFL course by participating in out-of-class storybook reading.

From the library or from the researcher, they could check out a book that was at the appropriate level and interesting for them to read. The book could be children's picture storybooks, children's novels, young adult novels or any English novels of their choice. After reading the book on their own, they would need to orally read the whole picture storybook or one randomly assigned chapter from a novel aloud to the researcher to gain bonus points. The researcher would listen and intermittently check the student's comprehension regarding vocabulary, phrases, sentences, or a passage.

Out of the two hundred sophomore students from 4 different majors who were aware of this research project, seventeen participated in this year-long study. This in-depth report focused on one of the participants, Sally, whose English proficiency was at the CEFR A2- level. Data came from multiple sources. Oral reading of the books she selected was the major source of data complemented with an open-ended interview after each read-aloud session and participatory observation of her classroom performance.

Profile of the Case

Sally was a non-English major sophomore student in a private university in Taiwan. As other sophomore students, she had had six years of formal instruction of English prior to college. She never had a native English speaking teacher. The average class size in high schools had been about fifty. She felt her English wasn't as good as her peers because her vocational high school didn't place as strong emphasis on English as academic-oriented high schools. In her high school years, she had 2 hours of English class per week, whereas her peers from the academic-oriented schools had 6.

There were forty-five sophomores in her English class. The class met for two fifty-minute periods each week. She always sat at the front row of the class, paid full attention to the teacher, and actively participated in class activities. On the school unified midterm and final exams, she did much better on reading (around 90 on the 0-100 scale) than on listening (around 60 on the 0-100 scale). Aware of the importance of English in her future career, she was very motivated to engage in this out-of-class reading to improve her English.

Initial Stage-Book 1

The first book Sally chose to read was *Alexander and the Wind-up Mouse* by Leo Lionni, a heartwarming story about the friendship between a real mouse and the wind-up mouse. According to her, the day before she came to the reading session, she quickly browsed through the story to get the general idea, and then looked up the unknown words in the electronic dictionary. After she understood all the vocabulary, she spent about 1 hour practicing reading it aloud several times to a more proficient classmate whose TOEIC score was over 500. On the day of the reading session with the teacher, it took her 12 minutes and 9 seconds to finish reading the 741-word story; that is, a reading rate of 60.9 wpm (words per minute). In this first story, she mispronounced 70 words out of the total of 741 words,

an error ratio of 1:10.6, meaning one error was made in every 10.6 words and an accuracy rate of 90.6%. She self-corrected 6 errors, which equaled a self-correction ratio of 1:12.7, meaning one self-correction was made every 12.7 errors. The entire time, she read with fixed speed (about one word per second), flat tone, and constant pauses at unfamiliar words. The details of her problems in terms of fluency, pronunciation, and comprehension were presented and the teacher's responses were followed.

Fluency

Her oral reading of this first book sounded choppy because of the constant pausing whenever there was a word she wasn't sure of the pronunciation. What further contribute to the choppy reading was that she didn't always pause at the proper place of a sentence. Thus, even for a sentence with no difficult words for her, she sometimes paused in the middle of a phrase, resulting in less comprehensible reading. Take the first page of the story as an example.

0101 "Help! Help! A mouse!" There was a (*1s pause*) scream. Then a crash (*crush*).

0102 Cups, (*1.5s uhhh*) saucers, and spoons were (*wa, where*) flying in all (*in a, in all*) directions.

There was a 1 second pause before the word, *scream*, on the first line, and another 1.5 seconds pause before the word, *saucers*, on the second line. In this story, the words that stumbled her but were eventually read correctly were: *blackberry, blocks, broom, chase, circles, frightened, hideout, lizard, said, saucers, scream, squeak, tiny, toys, whispered, woolly*. On the other hand, words that cause her to pause but weren't pronounced correctly were: *alas, Alexander, blinding, cautiously, crumbs, cuddle, pebble, pebblepath, pillow, precious, quivering, searched, suddenly, wheels, wind-up*. There were two words, *blinding* and *precious*, that the pauses were longer—4 and 5 seconds respectively. For most words, she paused for 1 to 2 seconds.

0103 Alexander (*A-li-san*) ran for his hole | as fast as his little | legs would carry him.

As she read onto the third line of the first page, two brief pauses were placed, one between *hole* and *as*, another between *little* and *legs*. The first pause was a proper one since it marked the boundary of two major phrases in the sentence. However, the second one was misplaced as the noun phrase, *his little legs*, was then split into two broken parts. Such misplaced pausing right before the noun in a noun phrase was prevalent throughout this read-aloud. Here are some of the examples: *the | blackberry* (0702), *a magic | lizard* (0703), *that very | afternoon* (0801), *the | path* (0802), *a | gift* (1006), *in the | bush (push)* (1104), *in the | baseboard* (1302). Other less prevalent ones include misplaced pausing right between noun and verb, such as, *said | Alexander* (1004), *Willy | sighed* (1007), *he | thought* (1007). Some of the above examples could be resulted from her unfamiliarity of those nouns' or verbs' pronunciations so that she needed the brief pause to think. However, the following examples were situations when she paused inappropriately in the middle of a phrase containing no difficult words for her.

1002 ... In a cu-corner of the | pan-try **he saw | a box | full of |**

1003 *old toys, ...*

1201 Alexander ran back *to the /*

1202 *house / as / fast as he could.*

This could be resulted from the lack of grammatical concepts to properly break a sentence into meaningful parts. Thus, the teacher demonstrated how to read a sentence with proper pause, varied speed, and intonation. Although she was struggling with correct pronunciation and fluent reading, which left limited room for improving intonation, the teacher still explained the western custom of reading a story to a child, demonstrated how to read a story with emotion, and encouraged her to do so by reading the next story to her friends or young relatives.

Pronunciation

In the interview, Sally mentioned that she hadn't learned phonics rules nor understood the phonetic symbols used in the dictionary; therefore, what she did with an unfamiliar word was to listen to the audio pronunciation of the electronic dictionary or to consult her classmates. In the following table, the 70 miscues were organized into three categories: vowel sounds, consonant sounds and miscellaneous miscues.

Table 1
Book 1 Reading Miscue I

Type of Miscue	Text	Reader	Line No.	Miscue No.
Short Vowel a e i o u	crash	crush	0101	1
	back	bake	0304	11
	at	ate	0402	15
	mousetrap	mouse-trip	0502	24
	wanted	went	0201	4
	Alexander	A-li-san	0103	3
	Alexander	A-lixander	0405	20
	Alexander	A-lixander	0501	23
	Alexander	A-lixander	0603	27
	Alexander	Alixander	0801	36
	Alexander	Alizier; Alexiden	0804	42
teddy	tidy	0403	17	

	pebblepath	pablepath	0702	34
	pebble	per-pe-, perple	0806	45
	empty	impy; empy	1301	65
	Willy	Welly	0401	12
	wish	wash	1108	58
	blinked	blank; blanked	1112	60
	colors	clouds	0803	39
	crumbs	croo, croombs	0201	5
	suddenly	san-, sun-, san-den-d-ly; sanderly	0802	38
	suddenly	sen-den-ly; seddenly	1011	51
	hungry	hangry	1001	48
Long Vowel i	wind-up	wend-up; wide-up	0401	13
	light	lit	1113	62
	quiet	quit	1113	63
Vowel Combination ea ee oi ou ui	instead	in-stayr	0303	9
	bear	beer	0403	18
	bear	beer	0504	26
	heard	hear-d	0701	31
	wheels	whe, whis	0303	10
	voice	voce	0805	44
	mysteriously	mys-ter-ris	0701	32
	round	roon	1106	57
	penguin	penground	0503	25
	quivering	quo-vering	0805	43
* note: In the reader column, the word after semi-colon were produced after teacher's demonstration.				

Unfamiliar with the phonics rules, Sally had difficulty with short vowel sounds (*a, e, i, o, u*), long vowel sound *i*, and vowel combinations (*ea, ee, oi, ou, ui*). There were several occasions when she uttered the short vowels long, as in the examples of back (pronounced as *bake*), at (*ate*), Alexander (*Alixander*), empty (*impty*), and crumbs

(*croombs*); on the other hand, there were a couple of words she made the long vowel *i* short, as in wind-up (*wend-up*), light (*lit*), and quiet (*quit*). Vowel combinations also seemed confusing to her and her struggle was manifested through some words such as bear (*beer*), wheels (*whis*), voice (*voce*), round (*roon*).

Table 2
Book 1 Reading Miscue II

Type of Miscue	Text	Reader	Line No.	Miscue No.
Consonant b vs p d/n vs r th vs t/d x vs s/z -stle	bush	push	0703	35
	bush	push	1104	54
	pebble	per-pe-, perple	0806	45
	instead	in-stayr	0303	9
	suddenly	san-, sun-, san-den-d-ly; sanderly	0802	38
	rustled	re, rus, rustly; rushely	1105	56
	thought	tought	0603	28
	thought	tought	1301	66
	thrown	drow	1008	50
	Alexander	A-li-san	0103	3
	Alexander	Alizier; Alexiden	0804	42
Omission d k l le ly n r s t	Alexander	A-li-san	0103	3
	Alexander	Alizier; Alexiden	0804	42
	round	roon	1106	57
	squeaked	s-quea	1401	68
	wheels	whe, whis	0303	10
	cuddle	cu, cud	0402	14
	pillow	pi-ow	0403	16
	mysteriously	mys-TER-ris	0701	32
	thrown	drow	1008	50
	wind-up	wend-up; wide up	0401	13
	wind-up	wide-up	0606	30

	wind-up	wide-up	0804	40
	tired	tied	1001	47
	loves	loves, love	0404	19
	empty	impy; empy	1301	65
Insertion d n r s	suddenly	san-, sun-, san-den-d-ly; sanderly	0802	38
	suddenly	sunddenly	1110	59
	penguin	penground	0503	25
	colors	clouds	0803	39
	dumped	drum	1008	49
	mysteriously	mys-ter-ris	0701	32
	pebble	per-pe-, perple	0806	45
	himself	himself-s	0303	8
	friend	friend-s	0406	21

The pronunciation problems with consonants included mispronunciation, omission, and insertion. Firstly, the mispronunciation patterns included replacing *b* as *p*, as in bush (pronounced as *push*) and pebble (*perpple*), replacing *d* or *n* as *r*, as in instead (*in-stayr*), suddenly (*sanderly*), mispronouncing *th* as *t* or *d*, as in thought (*tought*) and thrown (*drow*), mispronouncing *x* as *s* or *z*, as in Alexander (*A-li-san, Alizier*). Secondly, the omitted letters included *d, k, l, le, ly, n, r, s, t*, while the recurring ones being *d, l, n*, as in Alexander (*Alizier*), round (*roon*), wheels (*whis*), pillow (*pi-ow*), thrown (*drow*), wind-up (*wide up*). Thirdly, the inserted consonants included *d, n, r, s*; a few examples were penguin (*penground*), suddenly (*san-den-d-ly*), dumped (*drum*), and himself (*himself-s*).

Table 3

Book 1 Reading Miscue III

Type of Miscue	Text	Reader	Line No.	Miscue No.
-ed	wanted	went	0201	4
	whispered	whisper	0802	37
	rustled	re, rus, rustly; rushely	1105	56
	dumped	drum	1008	49
	excited	excite	1101	52

	blinked	blank; blanked	1112	60
	squeaked	s-quea	1401	68
	sneaked	sneak d , sneak- d	0302	6
	asked	asked, a-ask-k- d ; ask	0804	41
	hugged	hug- ged /ɪd/	1502	70
The /θɪ/	the (+vowel)	the (+consonant)	0702	33
Stress	ord inary	ordi- na -ry	0303	7
Unpronounced Word	searched	stre-	0901	46
	blinding	b-	1112	61
	alas	o-	1301	64
	precious	-	1101	53
	Cautiously	-	1401	69
Substitution	everyone	everyone, every body	0408	22
	a	the	1302	67
	The	he	1105	55
	were	wa, where	0102	2
	Why	What	0605	29

Among the last category, miscellaneous types of miscues, the *-ed* ending sounds of the past tense verbs was the most problematic mispronunciation. Many times she omitted the *-ed* sounds; while a few times when she did utter the *-ed* sounds, she couldn't distinguish when to pronounce it as /t/ /d/ or /ɪd/. The mistakes associated with this *-ed* ending pronunciation along with the pronunciation of *the* before a vowel sound and the proper stress of a word were commonly made across the less proficient EFL learners in this research.

When Sally mispronounced a word, 40 percent of the time, the teacher would directly correct it by demonstrating the right pronunciation. Sally often repeated after the teacher's demonstration for at least one to two times. Some of the words, such as crumbs, cuddle, and pebble, she did remember after one correction; while some, such as Alexander, wind-up, and suddenly, she struggled with throughout the story. After reading, the teacher would pinpoint some prominent problems and explain the phonics rules. In this reading session, the short vowel u (as in crumbs, hungry), the pronunciation rules of *-ed*, and how to understand the stress symbol in the dictionary were explained. In addition, the teacher also pointed out her tendency of omitting or inserting l (as in wheel), n (as in suddenly) sounds or r (as in dumped) and had her listen to the differences.

Comprehension

Despite the amount of mistakes made during the oral reading, while the teacher checked Sally’s comprehension of the story, she could effortlessly reiterate the plot and the main idea of the story in Chinese. She mentioned that this story wasn’t too difficult for her because she could understand it.

Table 4

Book 1 Reading Comprehension – Words and Phrases

Text	Reader’s 1st Attempt	Teacher’s Guided Help	Reader’s 2nd Attempt
spoons	V		
sneaked in	V		
cuddle	V		
pillow	V		
envy	V		
I’ve heard	V		
quivering voice	V		
tiny	V		
quiet	V		
cautiously	V		
wheels	ears	story context	V
crash (n)	something’s falling (v)	story context	?
squeak	chattering sounds	story context	?
ordinary	original	correction	
mousetrap	mouse’ stuff	correction	
saucers	?	picture cue	V
broom	?	picture cue	V
crumb	?	acting out	V
blink	?	acting out	V
blinding light	?	story context	V
dawn	?	guided question	V
cried	?	guided question	V

In vain	?	correction	
* note: bolded text – mispronounced words; V – correct translation; ? – untranslated.			

Above table listed the words the teacher asked Sally to translate. The first 10 words were correctly translated even some were mispronounced while reading (i.e., cuddle, pillow, quivering voice, cautiously). This was also a common phenomenon of the less proficient EFL students in this research; they knew a word’s meaning but were unable to pronounce it while reading or utter it while talking. The next 13 words were either incorrect or not translated. With the teacher’s guided help, she was able to use the story contexts or picture cues to correctly guess most of those words’ meanings. Among them, there were three notable difficulties that other less proficient EFL participants also faced: (1) interpreting words with multiple meaning (i.e., *cried* as shouted, *wind* as twist), (2) comprehending a word based on the part of speech that word was used as (i.e., *crash* as a noun vs a verb), and (3) understanding the meaning of idioms because of the tendency to look up each unfamiliar word separately (i.e., *in vain* – check the meaning of vain separately). The teacher’s response to these was demonstrating appropriate use of online dictionary or google and coaching them how to look up an unfamiliar word or idiom and how to determine the most suitable meaning in the story’s specific context.

Table 5

Book 1 Reading Comprehension – Sentences and Passages

Line No.	Text	Reader
0103	Alexander ran <u>for his hole</u> as fast as his little legs would carry him.	<i>This mouse, he used his little legs to run, to carry him to run, very quickly ran away.</i>
0601 - 0608	But when he was alone in the <u>dark</u> of his hideout, Alexander thought <u>of Willy with envy</u> . “Ah!” he sighed. “Why can’t I be a wind-up mouse like Willy <u>and be cuddled and loved.</u> ”	<i>When he was alone in his hiding place, he sighed, and thought why he couldn’t be like the toy mouse.</i>
0701 - 0703	<u>One day</u> Willy told a strange story. “ <u>I’ve heard</u> ,” he <u>whispered mysteriously</u> , “that in the garden, at the end of the <u>pebble</u> path, close to the <u>blackberry</u> bush, there lives a magic lizard who can change one animal into another.”	<i>He wanted to tell him a strange story. In the garden there was a... (pause) crystal path. At the end, there was a place, with the plant... next to this plant. Then there was a magical lizard, ... could change him into another.</i>

The above table listed the sentence or passage Sally was asked to translate. The details that weren't translated were underlined; the texts that weren't quite correctly translated were bold and underlined. She was able to get the big picture, but sometimes the details were left out. Aside from the reason that she forgot the meanings of some vocabulary (i.e., pebble, blackberry), the two other barriers were lack of syntax knowledge and lack of understanding of figurative phrases. The former one could be illustrated with how she translated the phrase, "Alexander ran for his hole." She comprehended it as the mouse *ran away* (from troubles described in previous sentences), but couldn't put the key preposition *for* with *ran* to work out the further detail of where he ran to. Another example concerning preposition would be *thought of Willy with envy*; the passive, *be cuddled and loved*. The latter could be illustrated with the second part of the same sentence, "Alexander ran... as fast as his little legs would carry him." Her understanding of it, *the mouse used his little legs to run, to carry him to run very quickly*, was the literal meaning of each word. Thus, the teacher had to explain to her the meaning carried in this commonly used phrase, "as...as" and the word "would".

Book by Book Progress

Table 6

Book 1-6 Reading Summary

Book	Total Word	New Word	Reading Rate (wpm)	Miscue (# of wds.)	Different Miscue (# of wds.)	Accuracy Rate (%)	Error Ratio	Self Correction (# of wds.)	Self Correction Ratio
1	741	28	60.6	70	60	90.6	1:10.6	6	1:12.7
2	687	17	105	33	17	95.2	1:20.8	12	1:3.8
3	398	25	73.8	23	23	94.2	1:17.3	9	1:3.6
4	855	28	75	36	31	95.8	1:23.8	17	1:3.1
5	901	30	102	44	38	95.1	1:20.5	26	1:2.7
6	1207	40	68.7	68	62	94.4	1:17.8	20	1:4.4

Book2

The second book Sally chose to read was *One Fine Day*, written by Nonny Hogrogian, a retelling of an Armenia folktale about a fox's journey to get his tail back. Before the reading session, she spent about 1.5 hours preparing for it, about the same amount of time as the first book. The total read-aloud time of this 687-word story was 6 minutes and 32 seconds, which is a reading rate of 105.2 wpm. A total of 33 miscues were made, which was

an error ratio of 1:20.8 and the accuracy rate of 95.2%. She self-corrected 12 errors, which was a self-correction ratio of 1:3.8. This was a much better performance compared to the first book. Because of the story's cumulative folktale feature, many words were repeated in the series of the chain events. This was why Sally felt that this book didn't have as many new words for her as the first one. By the same token, however, reading this story full of the repetition required proper pause and rhythm to convey the effects. That was why Sally felt it was hard for her because it was almost like saying the tongue twister. Take the climax of the story for example. A proper pausing of the longest sentence would be like this:

*I have to trade it for the egg | to pay the peddler | to get the blue bead | to give the maiden in return
for her jug | to fetch the water to give the field | to get the grass to feed the cow | to get the milk to
give the old woman | so she 'll sew my tail in place, or all my friends will laugh at me.*

Sally still tended to pause between the article and its following noun, or between to and its following verb. Here is how she paused:

*I have to trade it | for | the | egg to pay the | peddler | to get the blue bead to | give the maiden | in
return for her jug to fetch the water to give the field to get the grass to | feed the cow | to get the milk
to give the | old woman so she 'll | sew my tail | in place, or all my friends will | laugh at me."*

Despite the fact that proper pausing was still a problem, there were less long pauses to think of the pronunciation (only 3 instances which lasted 1 to 2 seconds), indicating that she was able to pronounce most words in this story. Her increased self-correction rate also showed a little better knowledge of the pronunciation and awareness of the pronunciation mistakes. For instance, the -ed pronunciation rules were applied correctly except to two words *lapped* and *begged*, both of these one-syllable verbs were pronounced as two syllables, *la-ped* and *be-ged*. The omission of *l*, *n*, *r* sounds were found only in *milk*, *kind*, *fire*, and *cleverness*; substitution of *r* with *l* was found in *fair*, which was pronounced as *fell*; mispronunciation of vowel *a*, *i*, *o*, and *ow* was found in *trade* (*trad*), *smiled* (*smelled*), *chopped* (*chapped*), and *cow* (*ca*). One interesting miscue was the contraction, *she 'll* and *I 'll*. In contrast to a proficient native reader, who often expect contraction and might read *couldn't* when seeing the text *could not*, Sally, or less proficient EFL readers of English, didn't know how to pronounce the contracted parts, such as *'ll*, *'d*, *'m*, *'ve*, and would read it *will*, *had/would*, *am*, *have*.

As Sally indicated, this story didn't contain many difficult new words nor utilize very complex grammar; therefore, it wasn't hard for her to grasp the big picture of the story. However, a few homonym and syntax structure still hindered her detailed comprehension. The homonym that troubled her was *lap* and *pleased*. In the sentence "...

he had lapped up most of the milk," she translated *lap* as greedy or tip (the milk pail) over; in "... she will be pleased with you," she translated *be pleased with you* as treat you well. (But she did translate another homonym *fair* in a *fair maiden* correctly.) As for the syntax, there was a sentence that she couldn't understand: "... the peddler was not taken in by the promise of a pretty smile or the cleverness of the fox..." and thought of it as *someone didn't carry out the promise*. What she lacked to fully understand the sentence involved two things, syntax knowledge and inference skills. The first part of the sentence, *was not taken in by the promise*, involved the passive voice of a verb phrase, *take in*. Neither the concept of the passive voice nor the verb phrase was understood. The second part, *a pretty smile or the cleverness of the fox*, involved connecting to the previous plots to understand what smile and cleverness had to do with the promise. In response, the teacher guided her through the story context to deduce the correct meaning.

Book 3

The third book Sally chose was *Rita and Whatsit at the Beach* by Jean-Philippe Arrou-Vicnod and Olivier Tallec, a light-hearted story depicting a little girl and her dog's fun day at the beach. Despite the fact that this story contains fewer texts, a 398-word story, she still learned more than 25 new words from it. Her reading rate was 73.8 wpm, accuracy rate 94.2%, error ratio 1:17.3, and self-correction ratio 1:3.6. Although the reading rate wasn't as high as the second book (105 wpm), it was still better than the first (60.6 wpm). The reading accuracy rate stayed very close to the second book (95.2%), and the self-correction ratio was a little better compared to the second (1:3.8). In response to her mispronunciation patterns, the teacher explained short and long vowel *a*, short vowel *i*, and the digraphs *oo* and *ea*.

The author of this book used a lot of common expression, such as *wet blanket*, *all in all*, *you've gone too far*, *he had better behave*, which she couldn't quite figure out their meanings. The teacher spent a great amount of time demonstrating how to look for the meaning of these common idioms or phrases through internet. She then knew that the explanation of all the above expressions could be found through searching the whole phrase. Other than this, the teacher also spent time guiding her with homonyms, syntax structure, and inference skills.

Book 4

The fourth book Sally chose was *Circle of Hope* by Karen Lynn Williams, an inspiring story about how a rural Haitian boy overcame many obstacles to plant a tree for his new baby sister. Her reading fluency of this 588-word story was 75 wpm, with an accuracy rate of 95.8%, error ratio of 1:23.8, and the self-correction ratio of 1:3.1. As the above numbers showed, she did make steady progress each time. In general, the oral reading was less choppy and had less improper pauses. In addition, she started to understand a few of the teacher's questions in English regarding the plot, and she would guess and try to answer them in Chinese. In this story, Sally was introduced to a Haitian

custom of planting a fruit seed when a child was born and the tree would be seen as the guardian of that child. She also encountered several words that couldn't be found from the dictionary because they were Haitian Creole. The teacher demonstrated how she could find the meaning and pronunciation using Google translation tool and later found out the glossary in the last page that explained the meaning of those Haitian words. Despite the disadvantage of those unknown words, she did use the contexts or pictures to deduce the possible meanings of them – the first time she tried to rely on something other than the dictionary. Seemingly more confident in the read-aloud, the next books Sally intentionally chose were more challenging and contained more difficult vocabulary.

Book 5

The fifth book Sally chose was *Badger's Parting Gift* by Susan Varley, a touching story about how Badger's friends coped with his death through sharing the great memories they had with him. This western approach to deal with loss and grief of a loved one was very different from that of Sally's own culture, making reading this book an enriching experience for her. She learned about 30 new words from this 901-word story. Her reading rate was 102 wpm with the accuracy rate of 95.1%, the error ratio of 1:20.5, and the self-correction rate of 1:2.7. Although problems with homonym, syntax, and making inference still existed, the extent of details that she comprehended was improved. She indicated that she had applied the principles and techniques the teacher had demonstrated to prepare for the one-on-one reading session.

Book 6

The last book Sally read was *Stellaluna* by Janell Cannon, a story that cleverly integrated science facts into the adventure of a lost baby fruit bat who survived with the help of a bird's family and finally found her way back home. This 1207-word story was the most difficult one for Sally because it contained a variety of slightly different terms to vividly depict different actions. Among the 40 new words for Sally, half of them fitted in to this category (i.e. *croon, chirp, shriek, howl, hiss, gasp, startle, stutter, murmur, babble, swoop, dodge, perch, clutch, grip, clamber, crawl*), which made the read aloud a lot more challenging than the previous books. Her reading rate was 68.7 wpm, only better than the first book (60.6 wpm); however, she maintained very close accuracy rate of 94.4% as book 2 to 5, with an error ratio of 1:17.8 and self-correction rate of 1:4.4. In terms of vocabulary comprehension, it was quite an accomplishment that she remembered a lot of new vocabulary, such as *clamber, clutch, grip, grasp, gasp, wrap, startle, clumsy*, and she was able to choose the proper meaning to a homonym, *bear*, as a verb. As for story comprehension, there was no problem with her understanding of the main idea, the theme, and the entire plot, but to correctly translate every bit of detail was still a challenge to her.

DISCUSSION OF MAJOR OBSTACLES

Oral Reading

Arden-Close (1999) had pointed out that students' previous EFL learning experience in high schools greatly impacted their English learning attitudes and methods in colleges. The concept of expanding vocabulary as an essential way to improve reading had rooted in Sally's mind as well as many other university EFL learners'. When asked about any out-of-class reading related activities she was engaged in, Sally referred to studying TOEIC vocabulary whenever she had time as the main one. As most students, she would memorize the spelling and the meaning of the vocabulary, but she wouldn't be able to pronounce the words because she didn't understand the symbols. This obstacle of not knowing the pronunciation symbols nor the phonics had hindered her not only in oral reading but also in listening and speaking. She couldn't pronounce some simple words, such as *far, dry, set, had, lived, were, free, grow, side, child, ready*, correctly, even though she recognized those words. As Yan & Wang (2011) observed, a less proficient EFL reader would rely heavily on the bottom-up process to decode letters and words. With very little phonics to start with and the incidental teaching of the instructor, she had progressively shown better phonological awareness in correctly sound-out words and self-corrected miscues, applying the correct vowel sounds (*shade, settle, earth, wish, cried, goat*), *-ed* ending sounds (*ached, wrapped, howled, visited, guided, nodded*) and some consonant sounds (*twig, path*). The more difficult ones for her involves vowel combinations (*ea, ee, ou, oo, oi, ie, ir, ew, ow*), short versus long vowel sounds (*passage, lesson, yell, grip, knot, hopper, until; rays, complete, climbed, silence, mused, confused*), and complex sounds (*except, peculiar, through, neither, shrieked*) which were the dominating miscues till the last read aloud. In addition to the above struggles, she couldn't understand nor respond to most of the instructor's English questions. Until the 4th read aloud, she could catch some keywords in the instructor's questions, especially if those words were from the story. She mentioned in the 5th interview that starting from winter break she listened to some simple English songs for the purpose of listening practice and she could finally catch some keywords while doing so. In her mind, those keywords would pop up in written forms and then she would think of the Chinese meaning of the words. It still took her a while to process and guess the meaning of the lyrics, but she felt delighted that her listening was improving. However, speaking was still challenging for her. Up till the last session, she still responded to the instructor's questions mainly in Chinese and occasionally in one to two simple English words but never in complete English sentences.

Comprehension

In terms of reading comprehension, Sally's general understanding of the plots was correct. The obstacles were hidden in the detailed comprehension when the following were involved: (1) homonyms and idioms, (2) grammatical knowledge, (3) cultural background knowledge, and (4) inference skills. Homonyms and idioms are

more complex and difficult to learn even for L1 beginning readers (Tompkins, 2011). As for Sally, in the very beginning of her participation in this reading project, she wasn't that aware that many words have multiple meanings and tended to associate one meaning to one word. One possible reason could be too used to the layout of most vocabulary study books: one vocabulary followed by its commonly used definition in Chinese and one example sentence in English and Chinese. The homographs that she misinterpreted included *wind-up* (book 1), *lap* (book 2), *nasty* (book3), *blinking* (book4), and *slippery* (book 5). She also tended to look up one unfamiliar word at a time; thus created problems understanding idioms or phrases such as *as...as* (book1), *all in all*, *wet blanket*, *you have gone too far*, *he had better behave* (book 3), *scrub fire* (book 4), *settled down* (book 5). With the instructor's demonstration and guidance of how to interpret a homograph by choosing the best meaning for the context and how to look up the meaning of idioms, phrases, or slangs, she was capable of applying above tactics to enhance her comprehension. In contrast, beyond words and phrases, when more grammatical knowledge, cross-cultural background knowledge, or inference skills were necessary, her reading comprehension greatly suffered.

CONCLUSION

Despite the recurring difficulties with homonyms, idioms, more complex grammar, cross-cultural background knowledge, and inference skills, Sally's progress of the 6 one-on-one reading sessions showed (1) improved oral reading fluency, (2) gradually developed conscious awareness of the pronunciation errors and thus increased self-correction rates of oral miscues, and (3) progressively better competence to apply the reading comprehension techniques taught by the instructor. Although these findings were based on one case, the promising results do encourage an alternative remedial option for less proficient EFL learners. This out-of-class reading of children's literature provides authentic reading materials that learners could read with less pressure and more pleasure; in the reading session, the instructor can provide one-on-one scaffolding and incidental teaching tailor to individual learner's needs. To gain more insight into the benefits and feasibility of this type of practice, research in larger scale of less proficient EFL learners is needed.

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MINING GAME FEATURES TO PREDICT EMOTIONS

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ABSTRACT

An innovative approach in implementing data mining methods to model and validate emotions elicited in players during computer game play is presented. We propose a novel algorithm called PEP (Predicting Emotions in Players) that predicts emotions in players based solely on game design features. Being able to predict the emotional response based on game features can (a) assist the game designers to design games that allow players to stay engaged and focused, (b) point to emotional reaction that differs from the expected, and (c) facilitate in creating a cognitive profile of players. PEP was implemented on a set of 15 "cognitively responsible" games which involve identifiable cognitive functions of the player. To determine if and how the game design features alone could trigger any emotion in players, we first identified 10 prominent game design features that, according to others' research and expert opinion, provoke emotion in players. We apply k-nn classification algorithm on this reduced set of features to find a game g's nearest neighbors and their expected emotions. The expected emotions of these neighbors are then used to predict emotions triggered by g. Results reveal that reducing the number of game attributes to any less than 10 drastically reduces the model accuracy. Limitations of our approach and directions for future work are elaborated in the text.

1 INTRODUCTION

In this paper, we present our approach in using computational methods for modeling and validation of cognition/emotion interaction during computer game play. In terms of emotion, we conducted literature reviews to identify game design features that elicit emotion in players; in terms of cognition, the games we used are 'cognitively responsible', meaning that they involve identifiable cognitive functions of the player [10]. The player's performance while playing such games may help create a cognitive profile of the player, including a comparison between the expected and recorded emotional reactions to the game play. Predicting emotions in players is not a trivial task, but is relevant for creating one's cognitive/affective schemas and following their change during intervention. Current research on emotions and video games focusses on the emotions triggered in players while interacting with a game (E.g., if a player in state s chooses p as the next action, then emotion triggered is e). We argue that game design features alone can also trigger emotions in players, regardless of how it is being played. Every game is designed using features that relate to the game type, story line, visual appearance, music, rules of the game set by the designer and many others [6]. Although we extracted 21 game design features using these essential elements, we use just 10 in our experiments. Data mining is the process of extracting interesting patterns, rules or trends from large amount of data to assist in making decisions on future activities. Data mining tasks can be classified as descriptive (e.g. association rule mining) and predictive (e.g. classification and prediction). We propose an algorithm PEP (Section 3) that mines a game dataset using k-nn classification method to identify emotions in players. The ability to predict emotions using design elements as features can (a) assist game designers to design games that allow players to stay engaged and focused, (b) identify emotional reaction that differs from the expected, and (c) facilitate in creating cognitive profiles of players.

2 RELATED WORK

Current research on emotions and games focusses on emotions triggered in players while interacting with the game. Lazarro [1] proposed a method that investigates how objectives of playing games can arouse emotions. E.g., if the game is being played just for the fun, emotions induced are wonder and curiosity, but if the game is played solely for winning (hard fun), then emotions induced are either frustration or triumph. Wang and Marsella [4] used the appraisal theory of emotions to induce emotions in players. Appraisal theory of emotions argues that emotions arise from two basic processes: appraisal and coping [3]. Appraisal is the process by which a player assesses the situation within the context, before reacting to it. Coping defines how a player responds to the already appraised situation. Coping strategies include asking for help, orignoring and moving forward. E.g., a player whose gaming character suddenly finds himself alone in a dark room may perceive it as a dangerous situation (appraisal), and thus brings his weapon out (coping with danger)—the emotion aroused here is fear. According to Hudlicka [3][4], designers can induce emotions by presenting a choice of game situations (e.g., presenting a challenge might increase stress), by making the game character affectively respond to the player’s actions and by making the game character display emotions. To identify emotions, they applied BayesNet classifier on data collected by using camera to capture facial expressions, or movement-oriented remote controllers (such as Wii). E.g., features such as rising of the eyelid, and pressing random buttons on a Wii controller identify ‘Surprise’ as the emotion. Bura [9] studied emotions triggered solely by game interactions by using a set of game-design variables such as freedom of choice given to player. E.g., when playing, state of this variable is subject to change (e.g., choices offered are too low) and this could induce an emotion of frustration. Although a lot of work is done on identifying emotions, identifying them using solely game design elements is still unexplored.

3 PROPOSED ALGORITHM PEP

PEP (section 3.1) assumes that computer games elicit 2 opposing emotions, positive or negative, as a simple dichotomy. Positive emotions are operationally defined as happiness and empathy, eliciting desire to play on. Negative emotions are operationally defined as sadness/disappointment, anger/frustration and boredom. The game dataset (D) for PEP is prepared and preprocessed in such a way that every game in D is represented by n binary attributes, where n-1 attributes are called features and nth attribute is the class label attribute. We first identify 10 prominent game design elements using expert opinion (team members, textbook [6] and other researchers [5][8]) as shown in Table I. Each game feature is a categorical attribute with several varying values for each category (Table II). E.g., feature 2 (Image) has 2 values (pleasant and gloomy). Each feature (column) f in Table 1 is transformed into m columns (m is the number of categories of f) with a value of 1 or 0. E.g., Image gets converted to 2 columns P and G and for game 1, P is assigned a value of 1 and G a 0 (since game1 in Table I has a value of P for Image). Each game in D is transformed into 31 binary attributes (Table III). The class label attribute has 2 values (1 for positive/0 for negative) and is stored in a vector called *apne*. K-nn [2] used in step 2.2 of PEP takes 4 inputs: k (number of neighbors), a test game t with d features (e.g. a game), set of games as training data with d features each, each game’s expected emotion in order to perform the following steps : (a) Calculate the similarity between test game t and training samples (b) Sort these similarities and pick the top k samples – these are the k nearest neighbors of t (c) Use *apne* to determine expected emotion (1 or 0) of the k nearest neighbors (d) if majority of neighbors have class 1, then predict t’s emotion as 1; otherwise predict it as 0. PEP’s data is sparse and asymmetric and therefore, it uses Jaccard’s coefficient (JC) to calculate similarity of t with other games computed using equation 1 [2]. E.g. JC between [1,0,0,1] and [1,1,0,0] = $1 / 2 = 0.5$.

$$JC = \frac{\text{number of 11 matches}}{\text{number of attributes not involved in 00 matches}} \quad (1)$$

3.1 Proposed Algorithm PEP (Predicting Emotions in Players)

Input: (1) matrix gf of size m rows (1 row for each game) and d columns (each game has d features), (2) Categories of each of the d design features, (3) Vector $apne$ of size m that stores the expected class label attribute of each game (emotion (positive/negative) elicited by a game's features), (4) k (number of neighbors)

Output: Vector $ppne$ of size m that stores the predicted class label attribute of each game

Method: ***begin of PEP

Step 1: Preprocessing: Transform matrix gf to a binary matrix bgf of size m rows and n columns, where $n = \sum_{z=1}^d |categories(feature_z)|$. E.g. $feature_1$ (actions) is transformed into 3 columns (for its 3 categories VR, SR and NR).

1.1 repeat for each attribute d of game $gf(i)$, initialize $p=1$

1.2 repeat for each category c of d

1.3 if $gf(i,d) = c$

$bgf(i,p) = 1$

1.4 else

$bgf(i,p) = 0$

1.5 increment p

Step 2: Apply k-nn classification algorithm to predict the class of each game using binary matrix bgf

2.1 repeat for each row r in bgf

Let $test = bgf(r)$ // r th game is picked as test data; all games other than r are used as training data

Let $train = bgf(s)$, where $s=1..m$, $s \neq r$

2.2. Compute Jaccard's coefficient JC_T between test and each row of train using equation 3.

2.3. Sort the JC_T values computed in step 2 in descending order and store the corresponding game Ids of top k of them in $games_{relevant}$.

2.4. $apne$ stores emotions elicited by each game as assigned by an expert (actual class labels) stored as 1 (for positive) and 0 (for negative).

countP = number of games in $games_{relevant}$ that are assigned 1 in $apne$ (positive emotions).

countN = number of games in $games_{relevant}$ that are assigned 0 in $apne$ (negative emotions).

2.5. if $countP > countN$, then

2.6. predicted difficulty level of test = 1;

else

2.7. predicted difficulty level of test = 0;

***end of PEP

Table I: matrix gf (4 games * 10 features) - abbreviations in table II

Feature s f->	action	Image	Back ground Image	Back ground music	feedback	Help	choice	difficulty	challenge	length of game
g1	SR	P	EX	MT	NO	AL	APC	E	NE	B24
g2	NR	P	SSC	MT	NO	AL	NEC	D	TM	B56
g3	VR	P	SSC	MT	WC	AL	APC	E	NE	B56
g4	VR	P	EX	VB	WC	OD	APC	E	RM	B56

Table II : Categories and their abbreviations.

1. Actions:	<ul style="list-style-type: none"> • VR-Very Repetitive • SR-Somewhat Repetitive • NR-Not Repetitive 	7. Choice	<ul style="list-style-type: none"> • APC-Appropriate Number of Choices to Take the Next Action • NEC-Not Enough Choices • TMC-Too Many Choices
2. Images:	<ul style="list-style-type: none"> • P-Pleasant • G-Gloomy 	8. Difficulty	<ul style="list-style-type: none"> • TE-Too Easy • E-Easy • D-Difficult • TD-Too Difficult
3. Background Image	<ul style="list-style-type: none"> • SSC-Simple and Single Colour • EX-Expressive 	9. Challenge	<ul style="list-style-type: none"> • RM-Right Amount of Challenge Offered • NE-Not Enough Challenge • TM-Too Many Challenges
4. Background Music	<ul style="list-style-type: none"> • MT-Monotonous • VB-Vibrant • TL-Too Loud 	10. Game Length	<ul style="list-style-type: none"> • L2-Less than 2min • B24-Between 2-4min • B56-Between 5-6min • M6-More than 6min
5. Feedback	<ul style="list-style-type: none"> • WC-Win Followed by a Clap • LA-Loss Followed by an “Awww” sound • WL-Win and Loss Followed by a Sound • NO-No Feedback 	11. Emotion (class label)	<ul style="list-style-type: none"> • h-Happiness (positive) • s-Sadness/Disappointment (negative) • f-Frustration/anger (negative) • e-Empathy (positive) • b-Boredom (negative)
6. Help:	<ul style="list-style-type: none"> • AL-Always Available • OD-On Demand • NV-Not Available 		

Table III : bgf for games 1 - 4 with features 1..10 transformed to binary

	VR	SR	NR	P	G	SSC	EX	MT	VB	TL	WC	LA	WL	NO
g1	0	1	0	1	0	0	1	1	0	0	0	0	0	1
g2	0	0	1	1	0	1	0	1	0	0	0	0	0	1
g3	1	0	0	1	0	1	0	1	0	0	1	0	0	0
g4	1	0	0	1	0	0	1	0	1	0	1	0	0	0
	APC	NEC	TMC	AL	OD	NV	TE	E	D	TD	RM	NE	TM	L2
g1	1	0	0	1	0	0	0	1	0	0	0	1	0	0
g2	0	1	0	1	0	0	0	0	1	0	0	0	1	0
g3	1	0	0	1	0	0	0	1	0	0	0	1	0	0
g4	1	0	0	0	1	0	0	1	0	0	1	0	0	0

4 EXAMPLE APPLICATION OF PEP

Example 1: Given a $4 * 10$ matrix of 4 games with 10 features each, categories of game features and a vector *apne* of size 4 that stores the expected emotion of each game, use PEP to predict the class label of each game so that the model's accuracy can be validated.

Input: (1) matrix *gf* as shown in Table I.

(2) Categories of each feature z (*categories(feature_z)*)

(3) Expected emotions (1 for positive/0 for negative) stored in vector *apne* = [1,1,1,0].

(4) k (number of neighbors) = 2

Method:

Step 1: Preprocessing: To transform matrix *gf* to a binary matrix *bgf*, we first compute n as $n = \sum_{z=1}^{10} |\text{categories}(\text{feature}_z)| = 31$ (Table II). Therefore *bgf* is of size $4 * 31$. The first 3 columns of *bgf* represent categories of *feature₁* (actions - column 1 for VR, column 2 for SR and column 3 for NR). Similarly, columns 4 and 5 of *bgf* represent categories P and G of *feature₂* (images) and columns 28, 29, 30 and 31 represent categories of *feature₁₀* (Game length). Following this process, *gf* gets transformed to a binary matrix *bgf* as shown in Table III.

Step 2: Apply k-nn classification algorithm to *bgf*.

Step 2.1 : for each row $r = 1 \dots 4$

Steps 2.2 and 2.3 for $r = 1$

$test = bgf(row1)$ // game 1 is taken as test data - other games are training
 $train = bgf(row2) \cup bgf(row3) \cup bgf(row4)$

$JC(test, train(1)) = 0.25$; $JC(test, train(2)) = 0.42$; $JC(test, train(3)) = 0.25$

Therefore, $games_{relevant} = [g3, g2, g4]$

Since $k = 2$, only $g3$ and $g2$ are considered as potential neighbors of $g1$.

Step 2.4 $apne[3] = 1$ and $apne[2] = 1$. Thus, $countP = 2$; $countN = 0$.

This implies that predicted difficulty level of $test = 1 \therefore ppne[1] = 1$

Steps 2.2 and 2.3 for $r = 2$

$test = bgf(row2)$ // game 2 is taken as test data - other games are training
 $train = bgf(row1) \cup bgf(row3) \cup bgf(row4)$

$JC(test, train(1)) = 0.25$; $JC(test, train(2)) = 0.333$; $JC(test, train(3)) = 0.11$

Therefore, $games_{relevant} = [g3, g1, g4]$

Since $k = 2$, only $g3$ and $g1$ are considered as potential neighbors of $g2$.

Step 2.4 $apne[3] = 1$ and $apne[1] = 1$. Thus, $countP = 2$; $countN = 0$.

This implies that predicted difficulty level of $test = 1 \therefore ppne[2] = 1$

Following steps 2.2, 2.3 and 2.4 for $r = 3$ and 4, $ppne[3] = 1$ and $ppne[4] = 1$

Final Output: $ppne = [1, 1, 1, 1]$. As can be seen, the proposed algorithm predicts emotions for 3 out of 4 games correctly.

5 EXPERIMENTS AND RESULTS

PEP's training dataset consists of 30 samples (data for 15 games played by 2 experts (Computer Science undergraduates)). Each game has 10 features and 1 class label attribute (expected emotion). To justify our selection of 10 feature attributes and to compare our proposed model with others, we experiment with Weka's algorithms [7] and found that Weka's J48 on our training dataset gives a better accuracy (84%) than PEP. However, it uses only 2 of the 10 attributes (Length of the game and Actions) used in PEP to predict emotions. Experiments with PEP reveal that reducing the number of attributes to less than 10 reduces the model accuracy to as low as 60%. We use leave one out (LOO) method of cross validation [2] to evaluate PEP. LOO performs N iterations (N is the sample size, i.e., 30). In each iteration, it takes one game as test data and the rest as training. It then predicts the emotions elicited by test using games in training data and validates this prediction against expected emotions (vector $apne$). This is then used to compute accuracy and f-score values for PEP. Accuracy A measures the ability of the model to match the actual value of the class label (e.g. positive emotions predicted as positive and negative as negative) and is defined in equation 2 (symbol # is read as number of).

$$A = \frac{\#correct_predictions}{\#predictions} \quad (2)$$

Accuracy is not meaningful when dealing with class labels that are imbalanced. E.g., assume that 10 out of 100 samples are actually labeled as positive and 90 are labeled as negative. In a worse-case scenario, even if the classifier predicts only 1 (out of 10) samples as positive, the accuracy computed as $91/100 = 91\%$ is very high. Other measures

that are used to evaluate classifiers are *precision* (defined as #expected positives predicted as positive / total number of values predicted as positive) and *recall* (defined as #expected positives predicted as positive / total number of positive s). In this example, $precision=1/10=10\%$ and $recall = 1 / 1=100\%$. Most classifiers achieve a trade-off between *precision* and *recall*, since it is very challenging to keep both measures high, by using F-score (F). If both are given equal importance, then *F* is a combined defined as shown in equation 3.

$$F = \frac{2 * precision * recall}{(precision + recall)} \quad (3)$$

Our experiments using k-nn indicate that the best results are for k=6 neighbors with an accuracy of 67% and an f-score of 76%, (Figure 1). A low value of accuracy can be attributed to the fact that PEP’s dataset has data from two different players who perceive game features very subjectively (even though they both use the same set of feature definitions). This is also confirmed by our results such as Game 1 of Player 2 is not in the k-nearest neighbors of Game 1 of Player 1. This is a limitation of PEP and can be improved in future by considering age, gender, other demographics of players.

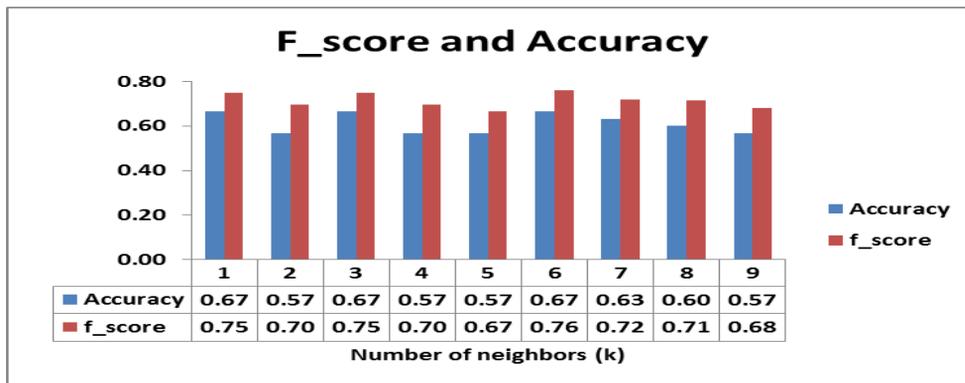


Figure 1: Accuracy and f-score of PEP

6 CONCLUSIONS AND FUTURE WORK

Our study presents a data mining approach to predict emotions triggered in players of simple, single-player and cognitively-responsible computer games using design features. Such a prediction can then be used to associate emotions with players’ cognitive strengths and weaknesses. A low value of accuracy (67%) and f_score (76%) in our model can be attributed to the subjectivity in understanding and using the definitions of game design features given to the players. In future, these definitions will be revised to achieve more clarity and objectivity. Our model uses manual methods to identify 10 out of the many game design features, and uses them as feature attributes in PEP. In future, we will use automated attribute selection methods such as Chi Squared attribute evaluation to verify if a revised set of attributes could improve the accuracy and f_score of our model. Another future direction is to use association rule mining to find features that often occur together and use them in predicting emotions. For example, an association rule such as ($\{VR, MT\} \Rightarrow \{NE\}$ 60% confidence) suggests that in 60% of the cases, if players that find games as VR (very repetitive) and MT (monotonous), they also find them NE (not enough challenges).

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TEACHER EDUCATION IN SPECIAL NEEDS EDUCATION (PRIMARY) AND LANGUAGE ARTS (SECONDARY) AT THE UNIVERSITY OF TRINIDAD AND TOBAGO

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ABSTRACT

This paper offers a critical analysis of teacher training in Language Arts and in Special Needs Education (SPED) at the University of Trinidad and Tobago (UTT), given the complex language and special education needs of this Caribbean twin island republic. This analysis takes into account the transition of the education system as articulated by the National Task Force in Education policy document of 1993, to present day realizations of policy management. The University of Trinidad and Tobago as the decade old state university, designs programmes aligned to national development projects. The focus of this study is thus twofold: on the one hand it explores the execution of the SPED programme at the UTT as aligned with public national initiatives, and on the other it examines the linguistic considerations that undergird teacher education in a Caribbean-Creole space. Additionally, the challenges that instructors/practicum advisors and pre-service teachers face, both in our diverse classrooms and out on field practice, will be explored for each programme.

Special Needs Education in Trinidad and Tobago has traditionally been a highly neglected area of study. In recognition of the need for formal training and professional development of special education teachers, the UTT stands as the forerunner in embracing inclusive education and as the sole tertiary level institution in Trinidad and Tobago that offers a Special Needs Specialization programme. To this end, not only does it teach students about engaging with a special needs population in an inclusive environment that is responsive to ever-changing local conditions that are indelibly triggered by international reform, but it also adopts the inclusive practices it proffers. This paper seeks to review the extensive national strides already achieved in special needs education over the past decade, as well as the challenges faced in the mammoth task of delivering education in a society that was previously exclusive to Trinidad and Tobago's differently-abled populations. In addition, the difficulties faced by our special needs teachers when having to *individually* adapt a National Primary Curriculum document for implementation across a broad spectrum of disability groups will be considered.

Teacher education in Language Arts involves the enacting of language curricula documents premised on a progressive educational philosophy, juxtaposed against the sociohistorical events from which the formal education system and current language practices have evolved. The discursive practices within the Language and Literature specialization at the UTT reveal a position of legitimizing public policy of inclusion, while at the same time interrogating the normalizing of limited dimensions of linguistic diversity in classroom practice. The challenges pre-service teachers face in negotiating language pedagogy theory and actual classroom practice; national education policy and culturally accepted norms; linguistic awareness and language attitudes are all considered in this paper.

In light of current policy mandates and national initiatives, this paper explores how the UTT has, thus far, endeavoured to transform language pedagogy at secondary schools and ~~to launch~~ promote inclusive education for the special needs community in Trinidad and Tobago.

Keywords: Teacher Training; University of Trinidad and Tobago; Language Arts; Special Needs Education; National Policy.

INTRODUCTION

1.1 Background: General and Special Primary Education in Trinidad & Tobago

The public education system of Trinidad and Tobago dates back to the emancipation of the slaves in 1834 and marked the beginning of colonial education in Trinidad and Tobago (Campbell 50). Recognising that

the children of emancipated slaves and indentured labourers had no opportunity for education, Lord George Francis Robert Harris, the Governor of Trinidad from 1846-54, formulated the first educational policy for the island by way of opening ward schools that would accommodate students despite racial, religious and cultural differences. This set the foundation for the current primary school system in Trinidad and Tobago, although it would take another century for children across all social and ethnic groups to access primary education. Nevertheless, during the educational evolution of the past 170 years, standards of achievement at primary schools in Trinidad were predominantly gauged by performance on a standardised National Test, delivered to ALL. Students with mild to significant disabilities, who were unable to access these methods of assessing achievement were left behind, and in many cases, dropped out of school. It was only in 2005 with ratification of the National Policy for Persons with Disabilities that special needs in education became part of the national discourse on educational reform. The Education system of Trinidad and Tobago, indelibly rooted in British standards of achievement through traditional and unaccommodating National Assessments, has served to create a national culture of educational segregation based on ability and disability.

1.2 Background: Language Education in Trinidad and Tobago

The teaching of English was used in colonial times to prepare students to function as “good colonials”, prompting the adage, “school was English and English was the school.” (London 287) Indeed from the time formal education was introduced on the islands in the mid nineteenth century, the curriculum was determined by the requirements of a British education, with English being stated as the language of instruction. The interface between colonialism and language policy is described thus by Pennycook: “Policies about providing or withholding an education in English were not simple questions to do with the medium of instruction...but rather were concerned with different views on how best to run a colony... [this] has considerable significance for understanding current language policies” (39).

In 1835 as part of the emancipation agreement, the Negro Education Grant was dispensed by the British government for compulsory primary school education for the children of ex-slaves.¹ During 1836-1869 five same-sex secondary schools were established in Port-of-Spain. These schools were mainly for the wealthy (essentially white) of the island. The Roman Catholic schools catered mainly to the French Creoles, and French was used alongside English as a language of instruction. The Queen’s Collegiate School on the other hand was “to be a cultural lever of anglicization to the detriment of French creole tradition...” (Campbell 21), with graduates from the Oxford and Cambridge Universities recruited as teachers for the institution. Although the home languages for most of the students who attended school were mainly French or Spanish, (with exposure to English and an English Creole), English remained the medium of instruction and Spanish was not taught.² In keeping with a classical British language education, French, Latin and German were part of the curriculum. The French/ English language divide was further exacerbated by the tensions between the Roman Catholic Church and English Protestantism. Thus, to the government of the day, St. Mary’s College was not only lacking in a classical education, with no scholarships to British universities like the Queen’s Collegiate School, but it also suffered from a major weakness of looking “more like a French secondary school teaching English awkwardly than an English secondary school teaching French tolerably bad.” (Campbell 28)

From the 1870s onward, more denominational primary schools were founded, including the Canadian Presbyterian Missions which sought to convert, through education, the Muslim and Hindu children of the Indian labourers. This constituted the ‘dual system’ of government and religious board schools which remains to this day. By the 1890s, these denominational schools had mushroomed in number and were getting greater financial support from the government. The children coming to these schools included children of ex-slaves speaking French, French Creole, Spanish, English and English Creole. Teachers of the Presbyterian schools were required to understand both English and Hindi to accommodate their Indian charges (who were after all just “Anglo-Saxons toasted in the sun”³), with the underlying intention of conversion. (Campbell 34) The quest to anglicize through language education was thus extended to the children of slaves and indentured labourers. By the early twentieth century the majority of the population of Trinidad and Tobago was using English or an English Creole

¹ An additional sum was provided by the Mico Charity Fund

² Even though Spanish was widely spoken and Latin America is so close to the islands, Spain was not considered one of the ‘great nations’, so Spanish was not part of the ‘classical education’ package. (Campbell 25)

³ Famous words of one of the founders of Presbyterianism in Trinidad, Rev Morton.

as a first or second language on account of the use of education as an instrument in the process of anglicizing the island.

A landmark shift in education post-independence came in the form of the fifteen year plan for educational development (1968-1983) directed by the first Prime Minister, Dr. Eric Williams. The building of twenty one Junior Secondary Schools, with follow-up adjacent Senior Comprehensives, ensured that 85% of the eleven plus age group and 63.8 % of the fourteen plus age group were guaranteed free secondary education (Assessment 1968-1983 2-5). This restructuring of secondary education still stands as one of the major achievements of the first national government of Trinidad and Tobago, and shadowed Dr. Williams' famous quote of children carrying "the future of the nation in their schoolbags?." As the 20th century progressed, the status of English continued to rise, so much so that when a new syllabus was published for primary schools in 1975, there again arose an outcry from the public on the treatment of English and the vernacular in the Language Arts section. While the writers of the syllabus sought to establish the Creoles as grammatical and systematic languages in their own right, public perception of anything other than English as "bastard" and "broken" prevented any reasonable dialogue of recognition and use of Creole in the schools. (Rickford, 264). The advances in electronic and print media also provided a conduit for linguistic misconceptions. Against this backdrop of hostility and resentment, the attempt at any form of mother tongue education was thwarted from the beginning.

By the end of the 20th century and into the 21st, Trinidad and Tobago, as a member state of the United Nations, signed on to policy that would jumpstart efforts toward greater access to quality education. Education for all (EFA) became the main focus of local educational reform with emphasis on access, training and quality. The immediate impact of this education policy on language education was through the framing, for the first time, of a Language Arts curriculum for secondary schools. The curricula for the three levels of compulsory education (early childhood, primary and secondary) all acknowledge the home languages of the children and speak to varying degrees of their worth as linguistic systems and the value of their use in classroom teaching. The only time prior to this that such acknowledgement was given was in the 1974 primary school syllabus, which reflected the concession from the Ministry of Education to Creole being considered a language.

LITERATURE REVIEW

2.1 Special Needs Education

The Marge Report of 1984 on the Special Education Needs in Trinidad and Tobago is one of the earliest documents that highlighted the fact that the needs of many students with disabilities were not being met. In a population of approximately 1,114,000, there were approximately 28,500 children with disabilities. Two major shortage issues were highlighted: the first being the paucity of specially trained teachers and the second being the limited number of Special Schools on the islands. In light of these two factors, recommendations that were made in the Marge Report suggested "gradually adjusting the mainstream schools to meet the needs of those special children already in them" (64), as well as creating opportunities for teacher training.

Recognizing that teacher training was necessary, but reluctant to invest its funds in this area, the then teacher training programme at the Teacher's Training College⁴, in 1988 sought to offer an Elective in Special Education that was only offered to a select few. Less than a year later, in 1989, the Ministry of Education of Trinidad and Tobago, in an attempt to address special education needs in the islands as proposed in the Marge Report, participated in a series of workshops under the auspices of the Canadian International Development Agency (CIDA) and the University of Manitoba. The CIDA/University of Manitoba workshops highlighted the need for more teacher education in the area of special education in Trinidad and Tobago. Still acknowledging several challenges on embarking on such a large-scale teacher training programme, neither the Ministry of Education nor the University of the West Indies were prepared to readily launch into such a program. Subsequent to this, the Education Policy Paper (1993-2003) documented that approximately 67% of children with special education needs were attending the nation's primary and secondary schools and there was, therefore, immediate need for a Special Education initiative. The paper sought to address both concerns of teacher training and education placement of the special needs population in general education primary schools which were brought to the foreground in the Marge Report. The Ministry of Education reported that the current

⁴ Now under the umbrella of the UTT

learning systems in existence for the last twenty years had "not generated the expected quality of graduates in the proportions which our levels of educational expenditure per pupil have led us to hope for, and it is generally recognized that they do not cater as efficiently as they might for those who are "educationally at risk" broadly speaking, as well as more particularly, for those individuals in our community with special needs." (Ministry of Education Policy Paper 1993-2003: 3) In recognition of the need for teacher education and training, the paper sought to outline the need to "improve the effectiveness of the teaching service" by investing in "inputs such as improved learning environments, the upgrading, recruitment, retention, etc. of teachers, educational administrators, planners.... in the system. "(4) Additionally, the intention was also articulated to create a National Curriculum Council, whereby a redesign of the Primary Schools Curriculum would reflect "a sensitivity to the significance, importance and limitations of educational and other new technologies ... in teacher training programmes and teaching and learning strategies."(9)

The second pressing issue was the lack of educational placement options for students with special needs. More recent initiatives have transformed the education system to one that encourages "inclusion" rather than "mainstreaming" of children with special needs. The educational development activity continued in Trinidad and Tobago, with interventions from international development agencies and partnerships with foreign universities. Inter-ministerial endeavours saw the Ministry of Social Development simultaneously releasing a revised and Government-approved National Policy on Persons with Disabilities in 2005. Persons with disabilities in Trinidad and Tobago were to be afforded a public education and as part of the effort to support students with special education needs, the Ministry of Education was assigned the task of creating and delivering a programme that would train teachers to address the diverse learning needs of these students in the Primary Schools.

With its inception in 2005 and being the National University, the University of Trinidad and Tobago took up the mandate to train teachers in Special Education delivery by offering scholarships and a training programme specifically designed to create special education teachers at all levels of the education system. The Draft Special Education Policy document of 2013 refers to the underlying principles of "Quality Education" and "Full Inclusion and Participation", thereby driving the special needs program at the national university, which trains pre-service teachers for delivery in an inclusive environment that removes physical and social barriers.

2.2 Language Education and Inclusion

The official language of education in Trinidad and Tobago is English, otherwise referred to in education documents as Standard English (SE) or Caribbean Standard English (CSE). The vernaculars of both islands are Creoles with an English lexicon base, which reflect Amerindian, European (English, French, Spanish), African and Indian influences. The two islands are regarded as separate speech communities because of the existence of a predominantly English based mesolectal Creole in Trinidad and a basilectal English based Creole in Tobago. There is consensus in the literature that many of the challenges of language education in a creole space are rooted in the fact that the differences between the creole and standard languages are not easily discernible. Arlene Clachar's paper "Pragmatic conjunctions in creole speakers' and ESL Learners' Academic Writing", indicates that English-based Creoles generally correspond to the Standard English variety lexically, but there is much divergence morphologically and syntactically (272). This phenomenon creates a "blurring of distinction" unique to the English Creole speaker as opposed to, for example, the Spanish student learning English. Since Trinbagonian students move between these two codes frequently and easily in informal settings, they create an "oral creole continuum space" for mixing the Creole and English varieties (273).

The "Inclusive Education Policy" of Trinidad and Tobago is adopted by the National Language Arts Curriculum (secondary level), with projections for inclusivity of "diverse cultures, beliefs, strengths, and interests that exist in any classroom and that influences the way students learn" ("Secondary School Curriculum, Forms 1-3, English Language" 7) Students with special needs are to "be given additional instructional support in negotiating the regular curriculum, not a different one" (7). These projections also appear under essential learning outcomes where it is desirable that students "demonstrate an understanding of their own cultural heritage, cultural identity and that of others as well as the contribution of our many peoples and cultures to society" (8). This "inclusion" is acknowledged in the Philosophy section of the curriculum in three main ways: by an adoption of the Multiple Intelligencies principle which requires meeting students' varying intelligencies with differentiated teaching strategies; by a validating of students' home languages and promoting its

accommodation in the classroom; and by including a variety of culturally relevant exercises and texts into the content.

Anastasia Liasidou's *Inclusive Education and Critical Pedagogy at the Intersections of Disability, Race, Gender and Class* takes a critical look at the inclusive education movement and deconstructs "inclusion" as focusing on "enabling students to 'overcome' barriers to learning and participation by devising 'specialist' educational measures and interventions allegedly intended to respond to students' right to education, rather than addressing the barriers to learning and participation endemic to the curriculum, the assessment regimes and institutional conditions of current schooling." (171) These barriers are not limited to students' background and abilities, but also to inappropriate teaching methods (172). She calls for a repositioning of inclusive education in discourses that move beyond "individual pathology perspectives" adopting a "systemic approach to integrating school reforms with concerns for addressing gross injustices and other sources of social disadvantage" (177). These sentiments are similar to those of educational linguists both within and outside of the Caribbean region who also cite "inappropriate policy at the official levels...inappropriate characterization of the learning/teaching contacts as on the basis of the use of inappropriate models...[and] a complex and dynamic set of contextual factors" (Robertson, "Teaching SE" 13) as reform concerns.

DISCUSSION

3.1 Special Education for Primary School Teachers at the UTT

Given that a much wider range of children with very diverse needs will continue to be accepted into general education schools, the skills of pre-service teachers must be based on comprehensive knowledge of human learning and an understanding of typical and atypical language development. The compulsory SPED courses for this programme have been designed to allow pre-service teachers to understand that the field of special education is a dynamic one based on laws and policies, diverse historical points of view and philosophies as well as research-based principles that determine the teaching of students with varied exceptionalities. The courses offered throughout the four-year programme at UTT focus on understanding of various individual and contextual factors that affect learning and behaviour for individuals with special needs. They equip pre-service teachers with a range of instructional strategies to individualise instruction and promote positive learning for students with exceptional learning needs.

The structure of the Special Needs Education Programme allows pre-service teachers to complete six semesters of field practice in special education classrooms as well as general education classrooms that are suited to their intended professional practice, after two semesters of in-house theoretical foundations. Through the Practicum programme, pre-service teachers are allowed to bridge the gap between theory and practice of teaching and learning in authentic classroom environments. Many of the primary school's principals welcome the SPED specialisation pre-service teachers during their field practice, as their current teachers appreciate the strategies and assistance offered in managing and educating their own students with disabilities. On these placements, SPED pre-service teachers are guided by professional and ethical practices relevant to the field of special education. They are expected to effectively collaborate with the multidisciplinary team that includes families, professionals and community-based organisations, being always responsive to diversity and demonstrating cultural sensitivity. Additionally, pre-service teachers are required to differentiate their classroom delivery across content, process and product while on their Practicum placements, and to develop and use a range of instructional strategies to individualise instruction.

In response to National Policies, pre-service teachers enrolled in the B.Ed. in Special Education are provided with foundation courses that offer a cross-categorical approach to understanding and engaging all learners with mild to more severe disabilities who are included in general education classrooms. Several courses are structured into Pedagogy, characteristics of diverse learners, types of learning differences, assessment, learning environments and social interactions, communication and collaboration, professional/ethical practice, instructional planning and instructional strategies that take into account individual learning differences are also structured into this programme.

Research has shown that one's physical environment influences learning. After highlighting the inadequate facilities of many Primary Schools here in Trinidad and Tobago, policymakers have sought to document the need for improved classroom environments. Many of the nation's schools were constructed before

the year 2000 and were not environmentally inclusive. Post-2000, schools were adapted and wheelchair ramps as well as bathroom rails were installed. UTT's commitment to being a tertiary level institution that practices what it preaches can be seen as the physical infrastructure of the UTT campuses are user friendly and promote accessibility for all students. The appropriate placement of wheelchair ramps and elevators at several areas throughout the campuses across the twin islands ensure the inclusion of any students with temporary or long-term physical limitations.

The UTT can boast of being the first University that accommodates students who have sensory disabilities by providing student aids, translators and modified examinations. The easy access to low- tech and high-tech assistive devices is also available to both instructors and students. Braille is easily accessible by students and are used to teach the Braille course. Appropriate lighting has been installed across campuses that will accommodate students with low vision. Allowing pre-service teachers the opportunity to communicate with students who may be deaf or hard-of-hearing, the SPED programme includes a Sign Language course that is led by a certified sign instructor.

3.2 Language Education for Secondary School Teachers at the UTT

As the state university, the UTT is expected to legitimize public policy and align its programmes to such. Apart from the inclusion policy, The MOE's Curriculum Development Division produced the Position Paper in September 2003 "Criteria for Assessment of Teachers of English Seeking Entry at Secondary Level", which outlined specified levels of linguistic training as an entry requirement for all prospective teachers of English at secondary school: prior to 2003, Language Arts teachers only needed a degree in Literatures in English to teach at the secondary level.

Pre-service teachers who specialise in Language and Literature for secondary school teaching take courses in Linguistics which not only introduce them to linguistic theory and application, but also allow them to interrogate their own assumptions about the languages that are part of the sociolinguistic complex of Trinidad and Tobago. Courses linked to Educational Linguistics require students to deconstruct the normalizing of limited dimensions of linguistic diversity in classroom practice. Recently written courses familiarize students with contemporary issues in first and second language acquisition/learning, as well as to deepen their understandings of the linguistic structures of English and English based Creoles to deal with the problem of the "blurring of distinction" between and among the various codes. Their eight practicum sessions challenge them to enact lessons that are sensitive to this linguistic diversity as well as to the varied learning styles of their assigned students. Thus, at the core of the linguistics programme is the developing of linguistic awareness to probe language attitudes and formalise best practices for language teaching in a Creole context.

The *Language and Language Education Policy of Trinidad and Tobago* published in 2013 argues for the "urgent necessity" of policy makers to ensure that students are "provided with a level of awareness of the nature of language as a human social phenomenon", and that they "develop an awareness of the significant languages available in the particular society, their function, their social significance, their users and their contribution to the society" (Robertson 118). Pre-service teachers are encouraged to adopt an awareness programme for Language Arts, one which admits home languages into the classroom in a non-instructive way, but with the added components of having students "learn about the many different varieties of language, such as dialects and creoles, and about the socio-historical processes that lead to a particular variety becoming accepted as standard (the socio-linguistic component)...[and] taught how to examine the linguistic characteristics of their own varieties and see how they differ from those of other students and from the standard (the contrastive component)." (Siegel 45) In this way, the UTT programme trains teachers to go beyond the scope of the Language Arts curriculum, which currently lacks an articulated awareness approach.

FUTURE WORKS

In order to ensure its continued relevance in a dynamic field so heavily reliant on research and evidence, there is continuous need to review and re-evaluate the SPED programme. In conducting research in this area and looking at the merits of the SPED Programme at the UTT, several challenges faced by both the instructors and pre-service teachers were highlighted. These challenges will form part of future action research in this area. This research is part of a larger comparative study that explores whether SPED pre-service teachers

who are exposed to teaching instruction in Differentiated Instruction (DI) will be more effective in their Practicum experience than Primary Education teachers who were not exposed to DI. While in the initial stages of research, SPED pre-service teachers have highlighted an area of greatest challenge to them as being the application and adaptation of the current primary school curriculum to planning their differentiated lessons for students with vastly deviant learning levels and mixed abilities in the same classroom. Despite the Ministry of Education's most recent policy stating the need for curriculum integration and differentiation to meet individual needs, the Primary School curriculum has only been revised to be "integrated" rather than "differentiated". SPED pre-service teachers struggle to adapt this new Integrated Curriculum to optimise the learning of all diverse learners in an inclusive classroom. Other challenges faced by pre-service teachers include having to operate in situations of negative teacher attitudes toward inclusion and the viability or relevance of the SPED programme. In many cases, pre-service teachers are also faced with incomplete student files and instances where students have not been referred for testing and as such have not been given diagnoses or have even been misdiagnosed, which acts as a barrier to the pre-service teachers in their efforts to conduct appropriate and relevant instructional planning.

Two courses currently being offered to the SPED pre-service teachers as part of a bridging programme are Sign Language and Braille. Sign language has, in part, previously been underrepresented at the University. While many instructors of the SPED programme possess extensive backgrounds in Special Needs Education etc., finding a current instructor with certification and advanced knowledge in Sign Language has been difficult. The UTT has since sought to rectify this situation, with the intention of providing the most superior instruction to all students. The Sign Language course is currently led and delivered by a certified Sign Language instructor. A similar situation arose with having to teach the course in Braille. A qualified Braille instructor has since been hired to deliver the course. SPED and LING instructors remain facilitators of and provide the necessary linkage between the planning and the delivery of the course. Separating administrative from academic functions may continue to be a challenge in the SPED programme, given the inherently dynamic nature of the programme.

Additionally, course content and course assessment strategies have had to be regularly adapted, presenting another challenge for instructors but highlighting the constant growth and improvement of the SPED programme at the UTT. At the UTT the instructors in the Special Needs specialisation continue to ensure quality standards through continuous monitoring and evaluating. The UTT programme has at its heart the need to produce adequately trained and qualified pre-service teachers who provide quality education for all students, including those with special education needs.

In terms of Language Arts at the secondary level, pre service teachers face two major challenges. The first challenge they strive to overcome is their own attitudes to non-standard and standard varieties of languages in the Caribbean, even as they are developing an awareness of the socio-political issues surrounding language use and prestige. The second challenge they sometimes face occurs when they go out on Practicum. Not always do UTT students meet public school teachers who are open to the accommodation of Creole in the classroom and who understand what an awareness programme entails. Nevertheless, pre service teachers in the Language and Literature specialisation continue to strive to work on appropriate models of language pedagogy for the Trinidad and Tobago context.

What remains crucial is fostering an inclusive and differentiated ethos by those who are in control of planning and facilitating student learning-- our nation's teachers. Leading by example has to emanate from the top. Following National Initiatives, at UTT, future teachers are guided in delivering a quality educational experience that is accessible to and attainable by all students.

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FACILITATING ECONOMIC DEVELOPMENT BY ADDRESSING LABOUR SHORTAGES IN AUSTRALIA'S AGED CARE SECTOR

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ABSTRACT

Rapid population ageing has dramatically increased the social and economic cost of aged care in most developed countries. Demand for care workers is increasing rapidly and many countries are experiencing problems in recruiting enough workers to meet demand. One such country that has a well reported ageing population and an acute shortage of aged care workers is Australia. This paper provides an analysis of the scope to employ Pacific Island migrant workers within Australia's aged care sector in order to promote economic development in their home countries through the remittances the workers send back from their earnings made in Australia. The paper achieves this by profiling potential aged care employment opportunities within the Australian economy that may be suitable for Pacific Island migrant workers. The research outlined thus supports the World Bank's policy directive in promoting and supporting the expansion of labour mobility in the Pacific region to better maximise the realisation of key economic development objectives and outcomes for countries in the region.

Keywords: Development Economics, Labour Economics, Migrant Care Workers

1. INTRODUCTION- AN INTERNATIONAL PERSPECTIVE

Rapid population ageing has dramatically increased the social and economic cost of aged care in most developed countries. Demand for care workers is increasing rapidly, and many countries are experiencing problems in recruiting enough workers to meet demand. In some countries, the shortage of care workers has been met by a large inflow of immigrant, mostly female, workers. However, the extent of migrant workers differs markedly between countries¹.

The UK is one of the largest importers of professional health care workers, but has not relied on immigrants for unskilled, personal care. Germany by contrast, has not experienced a lack of professional workers, while a parallel market for (often illegal and mainly East European female) health care workers seems to have emerged in recent years. These workers co-reside with the elderly person round-the-clock, and stay for a three-month period on a rotating basis. Illegal carers are incomparably cheap and raise serious competition against home service providers. Substantial cash benefits, little regulatory oversight, and a tradition of home care have encouraged extensive use of foreign care workers in Austria. Many of them are illegal, but are openly recruited by agencies for short-term rotating care work. Legal immigrant carers are more numerous in residential care (where they account for two-thirds of staff), than in home care; mostly because of language problems (while language does not seem to be a problem for the employment of undeclared workers in households).

The underground economy covers one-third of the market in Spain, where language is less of a problem, since workers migrate from Latin American countries. More or less legal flows from bordering Eastern countries are supplying the market for informal carers in Greece and Italy. Conversely, France and Sweden seem to rely least on immigrant carers. In Sweden, substantial public spending has resulted in a largely native workforce, which is

¹ Annamaria Simonazzi Care regimes and national employment models Working Paper n.113 UNIVERSITA' DEGLI STUDI DI ROMA Roma, June 2008

well paid and highly trained. In spite of a very different employment policy, native care workers are also predominant in France.

Australia and New Zealand have so far followed the Northern European model; a highly regulated system of employment and a high reliance on a formal market for aged care. Like the UK in particular, both countries have a high reliance on high skilled migrant care workers while excluding the low-skilled. But with the expansion of the EU there are signs and increasing demand for aged care workers there are signs that the northern model is under pressure. In the UK, a 2006 survey found that 16 per cent of care assistant and home carers were born outside of the UK. And Polish immigrants represented 62 per cent of foreign born works who registered to work in the health and medical services between 2004 and 2006.²

2. AGED CARE

Australia has a well reported ageing population. Using traditional dependency ratios, it has been estimated that the Australian figure of 19 per cent in 2003 will increase to 37 per cent by 2031(Hugo 2009). Hugo (2007, 2009) suggests that between 2001 and 2031 Australia might need nearly 70,000 additional residential care workers and more than 136,000 non-residential care workers. These projections could be an underestimate given that the current Australian caregiver workforce is itself ageing.

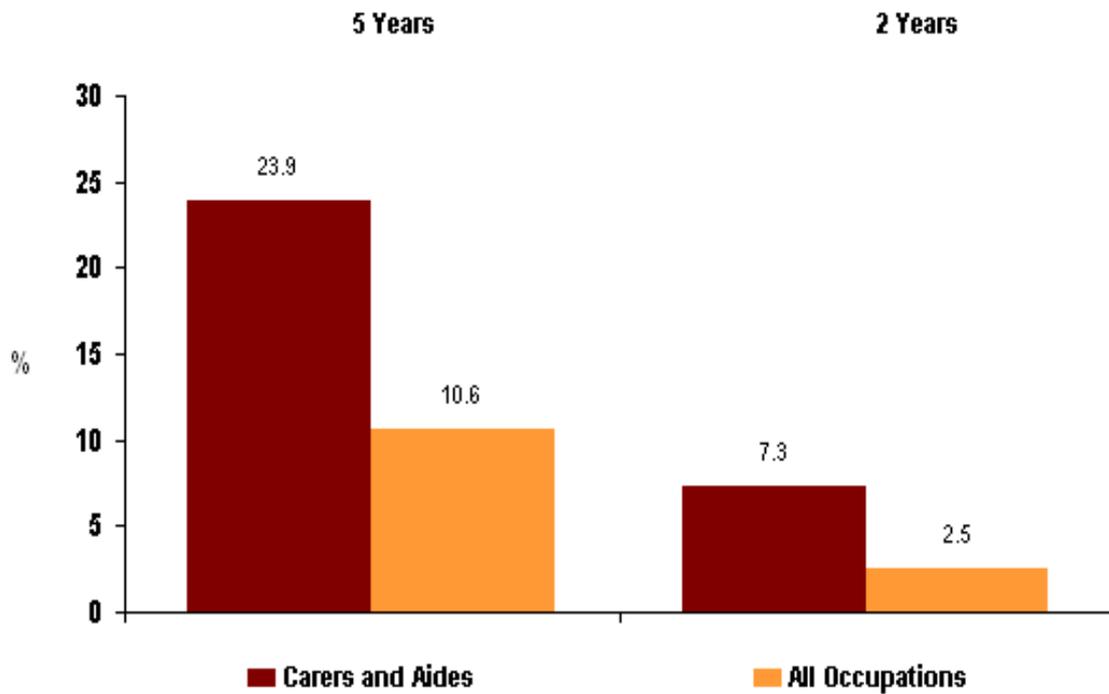
The Productivity Commission points out that by 2050 about one in four Australians will be over 65; in 2005 this was one in seven Australians (PC 2008). The proportion of people over 85 is expected to increase by at least four times by 2047. Australian Bureau of Statistics (ABS) data shows that Australia's population is projected to age rapidly over the next several decades, with the proportion of the working age population in Australia expected to decrease from 67.3% in 2010 to 59.2% in 2050, with the cohort of those born between the years of 1946 and 1953 ('baby boomers') projected to be reaching the retirement age of 65 years by 2011 (ABS 2008).

There are numerous challenges to providing high quality and cost-effective aged care services in Australia over the next few decades. These challenges include a substantial increase in demand for care as a result of an aging population, requirements for increasing diversity of care; increasing acuity is expected in both residential and community settings and a limited health and aged care workforce.

This Nursing Support Services and Aged Care industry in Australia includes sectors associated with Residential Care Services, Social Assistance Services and Other Health Care Services. Amongst Carers and Aides in Australia there has been considerable employment growth in recent times. The bar chart below illustrates this fact by highlighting the almost 24% increase in jobs for the occupational group over the previous five years and the more than 7% increase in the last two year period.

² The inflow of migrants taking low-skilled jobs has been particularly large in the UK in recent times. Most of these migrants work in agriculture, construction, hospitality and domestic service (au-pair); Fair enough? Central and East European migrants in low-wage employment in the UK 1st May 2006 Bridget Anderson, Martin Ruhs, Ben Rogaly, and Sarah Spencer.

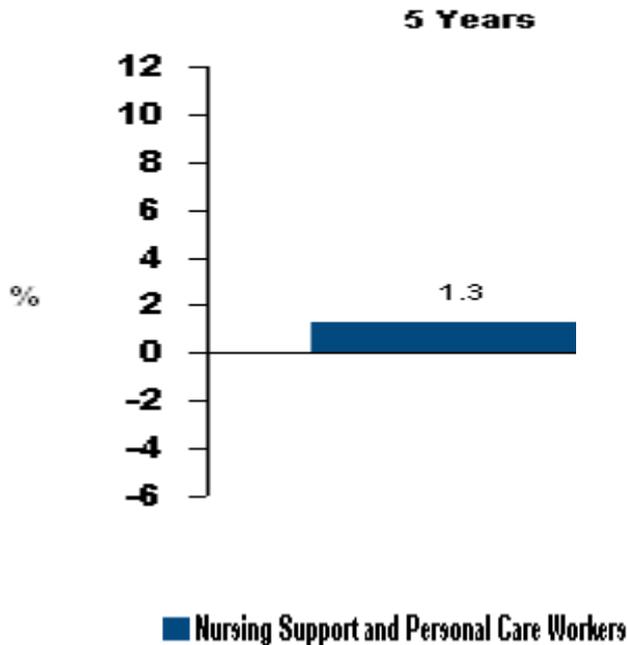
Figure 1: Recent Job Growth (%)



Source: ABS Labour Force Survey, DEEWR trend data to May 2010.

According to figures from November 2009 there was 93,600 workers employed in Nursing Support and Personal Care jobs across Australia. The data also indicates that employment amongst 'Nursing Support and Personal Care Workers' has grown strongly over the last five year period (experiencing 33% growth, including slightly more than 26% growth in the last two years) and that the increase in employment has been even more prominent over the past decade. These findings are supported by data from the ABS Labour Force Survey (LFS) and DEEWR indicating that 1.3% increase in job growth was recorded over the last five year period, as depicted in the chart below.

Figure 2: Recent Job Growth (%)

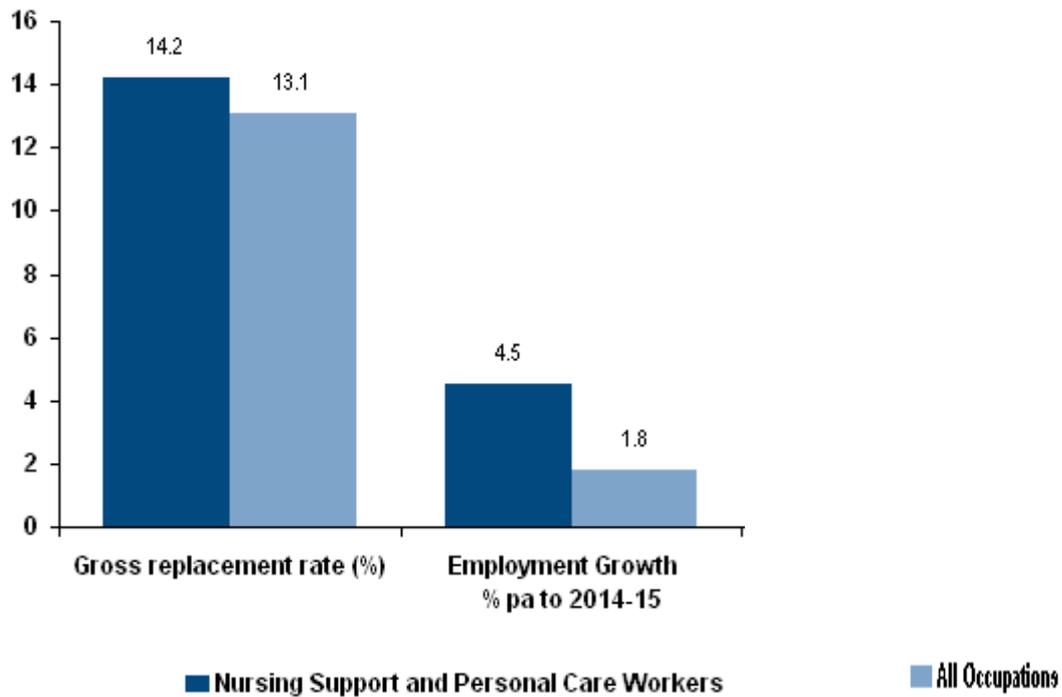


Source: ABS LFS, DEEWR trend data to May 2010.

The *Vacancy Report* for May 2010 indicated that there were just over 4,750 positions available for ‘Carers and Aides’ nationally. By the time of the release of the August 2010 *Vacancy Report*, the number of vacancies for ‘Carers and Aides’ had increased to over 5,100 (5106) with a monthly increase of 7.1% and an annual growth of 9% in vacancies for the occupational group being reported. The growth in reported vacancies for workers classed as ‘Carers and Aides’ has continued throughout 2010, with DEEWR’s September 2010 and November 2010 *Vacancy Reports* indicating that there were 5,279 and 5,830 vacancies respectively for the occupational group. The figures published in the most recent *Vacancy Report* released by DEEWR in November 2010 also documented monthly growth of 2.1% and annual growth of almost 20% (19.9%) in terms of vacancies for the occupational group.

The vacancy level for Nursing Support and Personal Care workers was reported as being ‘moderate’ with the proportion of workers needing to be replaced after leaving the occupation being slightly higher at 14.2% than was the average for all occupations (which was 13.1%). The data also indicates that the combination of industry sectors employing Nursing Support and Personal Care Workers are fairly conducive for supporting further employment growth in the future for the occupational group. Actual employment growth for the occupational group is forecast to be 4.5% per annum in the period to 2014-2015.

Figure 3: Sources of Vacancies (% share)

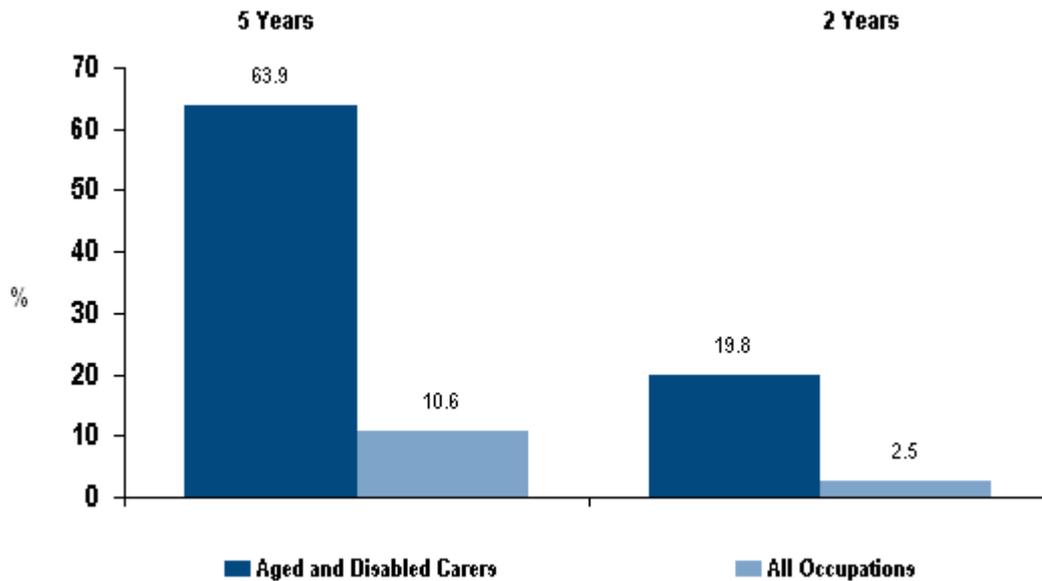


Sources: ABS Labour Mobility Survey, February 2008, Cat. No. 6209.0, DEEWR projections to 2014-15, DEEWR Internet Vacancy Index (12 months to November 2009) on 2009 average employment levels, ABS Labour Force Survey

The graph above shows two types of vacancy indicators for this occupation - gross replacement rates (%) and percentage per annum (% pa) growth to 2014-15.

Amongst Aged and Disabled Carers, there has been considerable employment growth recorded in recent years with almost a 20% (19.8%) job increase being reported in the last two years. The job growth figure for the occupational group over the previous five year period is even higher at nearly 64% (63.9%). Both these facts are indicated in the graph below.

Figure 4: Recent Job Growth (%)



Source: ABS LFS, DEEWR trend data to May 2010.

The graph above shows employment growth (%) over the past five years and two years for 'Aged and Disabled Carers' as an occupational group, compared with job growth for all occupations over the same time periods.

The Health Care and Social Assistance industry is now the largest industry in Australia, employing 1 194 500 workers in Feb 2010. It is an industry that has shown consistent long term growth and now employs 1 in 9 Australians. In the ten years to Feb 2010 the numbers employed increased by 48 per cent (387 000) compared with 23 per cent for all industries. This strong employment growth is expected to continue at a rate of 3.3 per cent per annum compared to 1.8 per cent for all industries. Within the occupational group Nursing Support and Personal Care Workers there was more than 22% increase in employment in the five years to February 2010, with approximately 15,900 additional jobs appearing in that time period. The growth in employment for Aged and Disabled Carers was even more substantial with an increase of over 67% being reported for the period between February 2005 and February 2010. This also represented an increase in the number of jobs within this occupational group of roughly 43,200 over that five year span.

As indicated by the data, a substantial proportion of workers in this industry provide care to older people. Over 200,000 people are employed (directly and indirectly) in residential and community aged care settings, caring for over 825,000 older Australians. In addition, an unknown number of doctors, GPs, specialists, nurses and allied health workers provide medical care to older Australians outside of the formal aged care sector. Furthermore, over 2 million informal carers are involved in providing care of older people. Aged care is also the fastest growing sector in the health care and social assistance industry

The most recent figure of aged care workers, 205,000 is an increase of 42,000 persons from just one year ago. Labour market specialist Mark Wooden of the Melbourne Institute has been quoted as saying: "It will keep getting bigger. The entire sector will one day account for 1 in every 2 workers."³

³ Aged & Community Services Australia, The National Report 25 March 2010 – Issue 224

The graph below depicts the projected employment growth per year (per cent per annum) over the next five years for Aged and Disabled Carers and Nursing Support and Personal Care Workers, with each occupational group anticipated to experience employment growth of nearly 5% per annum to 2014-15.

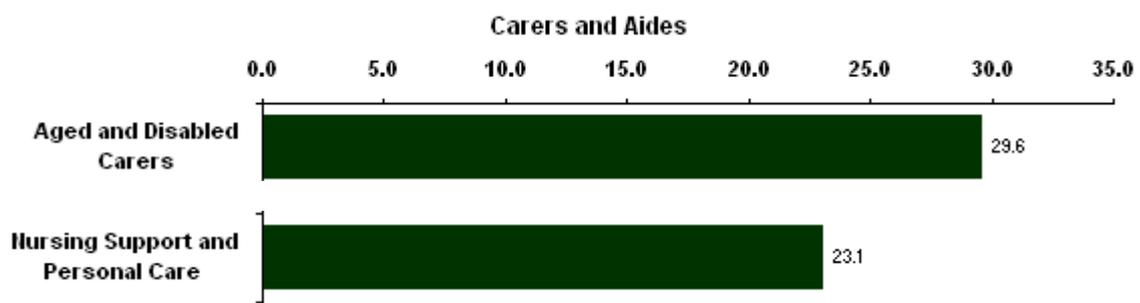
Figure 5: Projected Job Growth (% pa) to 2014-15



Source: DEEWR 2009-10 projections to 2014-15.

These growth forecasts for the respective occupational groups, will thus translate into an increase over the next five years of roughly 29,600 jobs amongst Aged and Disabled Carers and 23,100 jobs for Nursing Support and Personal Care workers. This job growth is illustrated in the graph below.

Figure 6: Projected Job Growth (thousands) to 2014-15



Source: DEEWR 2009-10 projections to 2014-15.

Comparing the sector's growth to manufacturing, which used to employ 1 in 4 Australians, a labour expert has said "we have found ways to make things using fewer people. To some extent we will be able to use expensive technologies to do that in health, but in the rest of the caring sector about the only way to provide more is to employ more people." The growth "is driven by demographics, no doubt about that," said Professor Wooden. "But it is also driven by increasing wealth. The richer we get the more we are prepared to spend buying good health and aged care. We are prepared to do it both through the welfare state, by paying more tax, and also privately by buying better services. Many people think that it is only poor societies that spend big on welfare, it is actually the other way around".

Residential aged care is provided by some 1,600 approved providers operating 3,000 facilities. Providers include private sector for-profit entities, local and state governments, community organisations, charitable and religious organisations and other not-for-profit entities. This latter group provides almost two-thirds of services, with approximately 10 per cent by governments. These services are evolving, for example, there are a decreasing number of smaller residential facilities, whilst the number of residential places has increased. There are increasing care workloads, which reduces satisfaction and causes other problems for increasingly scarce carers.

While residential aged care and its associated sectors is an important facet of aged care, nearly five times as many older people are cared for in the community and are able to remain living in their own homes with a variety of health services (e.g. General Practitioners, district nurses, allied health); community services (e.g. meals on wheels, housing) and informal care (e.g. family and volunteers).

Direct care workers provide care in the community (homes) as well as residential institutions. The Community care workforce comprises in excess of 52,000 workers (2001 estimate) providing general household assistance, emotional support, care and assistance. The numbers of workers increased by 44% between 1996 and 2001, and it can be expected that similar growth has continued over the last 5 years. Due to the lack of data collected, this estimate excludes personal care assistants and nurses providing care in consumers' homes.⁴

The precise number of personal care workers is difficult to pin down and there are large differences between, the Census, Labour Force Surveys and other data sources. A Department of Health and Aging Report put the number at 67,000 in 2004. In the 2006 Census there were only 30,000 persons identified as personal care workers but another 24,000 classified as nursing assistants. Other data released by DEEWR reported that in February 2010, there was approximately 86,000 people employed as Nursing Support and Personal Care Workers and 107,400 employed as Aged and Disabled Carers. However, different organisations present the data in different ways and according to the figures outlined in Table 3 only 23,000, those in the residential sector, can be clearly identified as aged care workers. It should be noted however that many aged carers are included as being part of the 'Other social assistance' industry sector and some nursing assistants are classed as being in a health occupation.

Table 1: Aged or disabled care workers in the Health Care and Social Assistance industries, 2006

Industry	Health occupations	Community services occupations	
		Total	Aged or disabled care workers
Health care	373590	9853	4996
All social assistance industries	87746	155861	60474
Aged care residential	66154	24921	22832
Other social assistance	18828	58827	33130
All industries	548384	294231	81130

Source: Health and community services labour force 2006, National Health Labour Force Number 42 Australian Institute of Health and Welfare Canberra, Cat. No. HWL 43

In 2007, around 175 000 people were employed in residential care, and of these around 133 000 were direct care employees. The direct care workforce is a mix of which personal carers, including assistants in nursing accounted for 63.6 per cent. In community care, around 87 500 people were employed in 2007, of whom about 85 per cent were direct care workers (Productivity Commission 2009, Martin and King 2008). Family members and other informal carers are the most significant providers of care to older people. They provide a wide variety of care and everyday living support services and play a fundamental role in the coordination and facilitation of formal community care services. The Productivity Commission estimated that there were approximately 2.3 million people providing informal care to the aged in 2006 (Productivity Commission 2008). Volunteers provide companionship and entertainment in residential aged care facilities and are integral to the delivery of certain

⁴ National Health Workforce Taskforce, National Workforce innovation and reform: Caring for older people Discussion Paper December 2008

community care programs, such as meals-on wheels. The number of volunteers, both informal and formal, involved in the provision of support services to the aged is not known, but it is thought to be significant.

Personal Care Workers provide assistance, support and direct care to people in a variety of health, welfare and community settings. Typical tasks that Personal Care Workers undertake include are: assisting people with their personal care needs, such as showering and personal hygiene, dressing and eating, mobility and communication needs. Other tasks can include ensuring people have a supply of clean clothing and linen, recording of daily activities and patient observations, and may include assisting with rehabilitation exercises and basic treatments and medications. Personal Care Workers are considered as a medium skilled occupation, and as such are classified in the Intermediate Clerical, Sales and Service Workers major occupation group.

In Australia, there is no mandatory licensing or minimum qualifications required for Personal Care Workers. The legislation relating to aged care simply requires that staff have appropriate skills to perform the duties of the job. However, the sector has actively sought to upgrade the qualifications of its workforce in recent times and most employers now require a Certificate III in Aged Care. This emphasis on formal qualifications is more prevalent in the metropolitan areas compared to regional and remote areas.

The National Institute of Labour Statistics (NILS) estimated that 79 per cent of Personal Care Workers in the Residential Aged Care workforce held a Certificate III in Aged Care and 10 per cent held a Certificate IV in Aged Care. Only 10 per cent of Aged Care Facilities had no Personal Care Workers with a Certificate III in Aged Care.⁵

3. RECRUITMENT OF PERSONAL CARE WORKERS

The occupations that were most commonly reported as difficult to fill in the Aged Care Residential Services Industry were Registered Nurses, Nursing Support and Personal Care Workers and Aged and Disabled Carers.⁶

The most recent survey of recruitment of Personal Care Workers indicates a high level of recruitment activity in the sense that almost all employers recruit some staff in a 12-month period.⁷ There is however, no acute shortage. Most vacancies are filled and the relative number of unfilled vacancies is no higher than in other occupations. On average, each vacancy results in about four applications, but the number of suitable applicants is much lower. Thus, to fill a vacancy, employers have very little choice. Insufficient qualifications and a lack of experience are the two leading causes of applicants' unsuitability. This reflects the increasing emphasis placed on formal qualifications and training in the Aged Care sector. Thus it was also found that a large proportion of successful applicants were thought to require additional training. Recruitment difficulties for Personal Care Workers were centred around working arrangements and conditions; wages not being competitive, the nature of the work and working hours. As regards the future, most employers expect a continuing recruitment need and that the current recruitment difficulties will persist.

Terms and conditions of employment

Most aged carers are now employed under the *Aged Care Award 2010*. This is a federal award, determined by the Australian Industrial Relations Commission and came into effect on 1 January 2010. It applies to the aged

⁵ National Institute of Labour Studies, Flinders University, *The Care of Older Australians a Picture of the Residential Aged Care Workforce*, Commissioned by the Department of Health and Ageing.

⁶ Source: DEEWR, *Survey of Employers' Recruitment Experiences*, 2009

⁷ Department of Education, Employment and Workplace Relations *Survey of Employers' Recruitment Experiences Personal Care Workers in Residential Aged Care May 2008*

care industry, meaning the provision of accommodation and care services for aged persons in a hostel, nursing home, aged care independent living units, aged care serviced apartments, garden settlement, retirement village or any other residential accommodation facility including in the home

Under the award flexibility provisions an employer and an individual employee may agree to vary the application of certain terms of this award to meet the genuine individual needs of the employer and the individual employee. Such variations must meet a so called 'no disadvantage test'. Employees under this award are employed on a full-time, part-time or casual basis.

Casual employment is pre-dominant form of employment for lower level workers. A casual employee is an employee engaged as such on an hourly basis, other than as a part-time, full-time or fixed term employee, to work up to and including 38 ordinary hours per week. A casual employee is paid per hour worked at the rate of 1/38th of the weekly rate appropriate to the employee's classification. In addition, a loading of 25% of that rate will be paid instead of the paid leave entitlements accrued by full-time employees.

4. TRENDS IN THE DEMAND AND DELIVERY OF AGED CARE

Aged care providers of both residential and community services are continuing to develop and improve services in what are often difficult and constrained circumstances. Some services for older people tends to be somewhat 'siloed', while in other parts of the aged care sector is moving toward teamwork and care involving professionals from several disciplines. There have been mixed responses to such changes. One concern has been the effect on quality of care of lesser skilled or unskilled workers taking on work usually undertaken by professionals. In addition, the wider range of multidisciplinary professionals in delivering care has created conflict over roles.

At the same time there is evidence that the aged care sector is willing to explore ways of reorganising work to make best use of available staff. Hitherto this has concerned the creation of new professional or assistant roles to meet current and evolving patient needs, and involve a reshaping of the clinical workforce to harness the full potential of multidisciplinary teams. These changes also impact on the workers who provide the bulk of hands-on-care, the personal care workers. On the one hand, the changes will require more educated and better trained personal care workers with the capacity to exercise more discretion in their work. But there is a limited supply of more advanced personal care workers. Thus, one might also see a greater differentiation in personal care work resulting in new opportunities for workers with lower levels of education and training.

In recent years there has an ongoing investment in the coordination of national health workforce action. Much of this effort is driven by the National Health Workforce Strategic Framework that was developed in 2004. The Framework was designed to guide national health workforce policy and planning in Australia for the medium-term future.⁸

The Framework was designed against the background of current challenges – particularly health workforce shortages and maldistribution; and future challenges – where the key affecting themes are considered to be demographic change, new technologies and empowered consumers. This is a clear recognition that the key medium-long term issue is the tightening national labour market. Thus, the first principle of the Framework is 'ensuring and sustaining supply'. To achieve this 'Australia should focus on achieving, at a minimum, national self-sufficiency in health workforce supply, whilst acknowledging it is part of a global market. One particular strategy is to 'reduce immediate shortages through short-term strategies including improving workforce re-entry and ethical overseas recruitment'.

⁸ Department of Health and Aging 2005 National Aged Care Workforce Strategy, Canberra

At the industry level the industry organisation ACSA recognises a workforce shortage is also one of the main issues confronting the aged and community care sector. In line with developments at the policy level, it has a National Workforce Committee to assist the Federation in developing and implementing strategies that will contribute to a committed, skilled and supported workforce. As regards recruitment of overseas workers it notes that the Health and Community Services Sector is one of the largest sponsors of temporary skilled workers. Nurses are the largest professional group coming in on the 457 visa. ACSA's members indicate that the most common visas used by them to employ overseas workers are the 457 long stay visa, 442 occupational training visa, which doesn't have the minimum wage level associated with the 457 visa, and student visas. The majority of workers who are brought in for the aged care industry by ACSA members are also RNs. In some instances Personal Carers (PCs) have been employed from overseas to work in rural areas. Despite the acute shortage of PCs, they do not meet the requirement for a skilled worker, mainly because their pay is below the skilled limit (currently around \$45,000). This requirement has sometimes been waived for rural and remote areas.⁹

Because registration of RNs, ENs and other allied health professionals is state based there is no central source of information on overseas registrations. Western, English speaking countries that have similar training to Australia are usually used as the preferred source country when recruiting overseas workers. Unfortunately, recruits from these countries tend to want to go to the main population centres, and unlike recruits from third world countries often have no immediate need to move. India and the Philippines are the next major source of workers. Recruits from South Africa and Zimbabwe are becoming more sought after. They have relatively high standards of training, often come from rural backgrounds and are more likely to accept placements in rural and remote areas. Pacific Islanders have been successfully recruited to work in remote indigenous hospitals as PCs whilst working towards registration as RNs

A range of methods are used to employ overseas workers. Preferably workers are interviewed in their country of origin by an experienced recruiter looking at clinical skills, understanding of medical terminology, and cultural fit of the applicants. All workers must pass the Occupational English Test (OET) or the International English Language Testing System (IELTS) within the two year period prior to their visa application. These tests may be undertaken at a number of different locations within Australia or in other countries prior to arrival.

The major costs involved in employing overseas workers can be covered either by the worker or the facility and has varied amongst our members. In cases where the worker has met the cost, the outlay to the facility has been minimal. There is also some concern about the long delays in overseas recruitment but most facilities are well versed in the sometimes complicated processes.

At the level of individual facilities many persons have a keen interest in the recruitment and training of migrant care worker. This interest is driven not just be a need for care workers but also the more diverse ethnic composition of Australia's aged persons and a desire to impart skills and knowledge to persons from less developed countries. Thus a former executive of a migrant resource centre hopes to pioneer overseas training for people who want to work temporarily in Australia in skills shortage fields, especially nursing and aged care. She has been quoted as saying: "(It's) an ethical approach to overseas skills retraining and recruitment, particularly in countries that will benefit as well, "We (would) train people locally (in their countries) and leave them with those skills as well as trying to bring some people (to Australia) as part of that deal."

The possibility recruiting caregivers from overseas is also explored in several academic studies. Hugo (2009)¹⁰ raises the issue and it is explored in more detail in Fine and Mitchell (2007)¹¹ and Callister et al (2009). Immigrants account for an even greater proportion of the Australian aged care workforce, but this proportion is

⁹ Aged and Community Services Australia, Overseas Workers for the Aged Care Paper, Scoping Paper June 2008.

¹⁰ Hugo, G. (2009). Care worker migration, Australia and development. *Population, Space and Place*, 15(2): 189-203

¹¹ Fine, M.D and A. Mitchell (2007), Immigration of the aged care workforce in Australia: Meeting the deficit, *Australian Journal of Ageing* 26(4), 157-61

not much different from their proportion of the total workforce. Thus, Australia is not particularly dependent on immigrants for their aged care. An interesting fact is that persons born in Fiji, Samoa and Tonga account for 1.5% of the aged care workers even though they comprise only 0.1% of the total Australian workforce.

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THE DISCONNECT BETWEEN D/DISCOURSE COMMUNITIES THAT IMPACT ON LITERACY EDUCATION AMONG INDIGENOUS SCHOOLCHILDREN

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ABSTRACT

Global trends in the field of education indicate that nation states invest resources to increase the level of literacy among their peoples. Malaysia, a multicultural country with a diverse population, is an exemplar of a nation that has taken several initiatives to improve the economic status and educational achievement of its indigenous populations (orang asli). In spite of the initiatives, the primary schoolchildren from the indigenous groups consistently perform below the national average in centralized national level examinations. Several issues affect literacy and education among the orang asli primary schoolchildren in Baling (Kedah) and Gua Musang (Kelantan). Both these adjacent districts are situated in the central part of Malaysia's northern region. A qualitative approach was used to elicit information using interviews. Information was collected from five participants who have extensive engagement with the orang asli community. Two of the participants are pursuing post graduate courses while three of them are teachers in primary schools. Interviews were conducted from 1 July 2013 till 30 June 2014. Generally, the findings indicate that there is a disconnect between the Primary D/discourse communities and the Secondary D/discourse communities of the students, as literacy needs are not similar in both the communities. The worldviews, beliefs and important aspects of the orang asli Primary D/discourse community need to be taken into account so that they feel comfortable in the classroom environment to acquire literacy skills. The five participants agreed that a high level of sociocultural sensitivity is critical in pedagogical practices so that the orang asli do not feel alienated from the pedagogical practices in the classroom. It is also important to impress upon the orang asli that the acquisition of literacy skills is an additional opportunity that is open for them to improve their literacy skills.

Keywords: literacy, indigenous groups, D/discourse community, primary schoolchildren, sociocultural sensitivity

INTRODUCTION

Malaysia, a multicultural country with a diverse population, achieved independence in 1957. Similar to countries in many parts of the world with indigenous populations, the Malaysian government has taken several initiatives to improve the economic status and educational achievement of the indigenous populations (orang asli). However, primary schoolchildren who belong to the indigenous groups have consistently performed below the national average in national level examinations. The orang asli children face challenges with literacy and educational attainment. This paper examines the issues that affect literacy and education among the orang asli primary schoolchildren in Baling (Kedah) and Gua Musang (Kelantan). Both these adjacent districts are situated in the central part of Malaysia's northern region. There are several schools that have a high percentage of orang asli students situated in remote areas.

Research Problem

Many initiatives have been taken to improve the standard of literacy and education among the orang asli children. In 2009, the National Key Results Areas was launched with a three year time frame plan in which students would acquire basic reading and writing skills in school (EPU / UNDP, 2011). The government has also set a minimum target in which all Malaysian children will have at least completed primary school education.

Globalization, multiliteracies, scientific discoveries, technological advances, and current developments in the education system pose a multitude of challenges to the educational advancement of the orang asli. There is a

need for literacy skills so that they are able to read, write and engage in literacy practices that help them to acquire knowledge and use the appropriate thinking skills.

Nevertheless, the effectiveness of any school effort or specialized program could be affected if parents and neighborhood influence are not well positioned to complement or supplement the efforts of the school and the policy-makers. Efforts must be taken to assist the orang asli in their educational progress. Many of the orang asli parents lack awareness of the pivotal role education plays in their children's progress because there are immersed in cultures that prioritize a different set of skills and knowledge that is connected to their daily lives.

Research Question

The two research questions in this study are as follows:

What influences literacy and educational achievement among the orang asli children?

What initiatives can be taken to promote literacy and educational achievement among the orang asli children?

LITERATURE REVIEW

Discourses is a broad-based term that can be used to encapsulate the process of interaction within members of groups. According to Gee (1991), Discourses "are ways of being in the world; they are forms of life which integrate words, acts, values, beliefs, attitudes, and social identities as well as gestures, glances, body positions and clothes" (pp.6-7). Gee (1991) goes on to define Primary D/discourse as the one "we first use to make sense of the world and interact with others"(p.7) and Secondary Discourse as the ones we acquire outside the home such as those in the schools (Gee, 1989). Challenges can arise when there is a huge gap between the Primary D/discourse of the students and the Secondary D/discourse that they are expected to learn in the schools. If members of the Primary D/discourse community are not familiar with the values and practices in the Secondary D/discourse community, this would imply that teachers would have to help bridge the gap between the two Discourses. For example reading books in Malay and English is valued in the primary schools but the orang asli children might find that reading materials are not available in their homes and this is not a common practice in their homes. The vocabulary that they learn in school might not be a part of their daily experiences in their homes which are situated in remote areas or in the jungle.

The research by scholars shows that there are many areas of literacy, schooling, and educational opportunities among the orang asli that need attention (Safari, 2012; Kamaruddin, 2008; Hassan 1997). There are several definitions of literacy (Hiebert, 1991; Langer, 1991;Shanahan & Shanahan, 2012; Hall, Meyer & Rose, 2012; Clay, 2014) but in this paper, the term is used broadly to refer to the acquisition of reading and writing skills to meet one's basic needs and achieve one's goals.

RESEARCH METHODOLOGY

A qualitative approach was used to elicit information based on structured interviews. Information was collected from five participants who had more than five years of extensive engagement with the orang asli community in rural areas. Their narratives relate to primary schoolchildren from the remote schools in Baling, Kedah and Gua Musang in Kelantan. Their views are also confined to schools where more than 80% of the school population was orang asli.

The orang asli are not a single homogenous group but for the purposes of this study, they are referred to collectively as orang asli. Two of the research participants are pursuing post graduate courses while three of them are teachers in primary schools (referred to as PG1, PG2, T1, T2 and T3). Interviews were conducted from 1 July 2013 till 30 June 2014 with the five participants. Semi-structured interviews were used to elicit information. Interviews were conducted three to four times based on the information they could provide. The findings were organized thematically (Creswell, 2009).

FINDINGS/DISCUSSION

The interviews revealed that there were many challenges that the orang asli children faced in schools. The research participants provided many useful insights on the culture of the orang asli and their values that had an influence on formal classroom learning.

Parental and home background

The five participants gave some useful insights on the challenges the students faced regarding literacy practices that were mostly lacking in the students' homes or their immediate vicinity. This had an effect on the teaching and learning of literacy as students did not read or read very little in their homes and did not see any necessity for acquiring a higher level of literacy. For example, T1 stated

Why do they need to think so much about literacy. They can easily survive in their place without any need for literacy. So, it is not right to expect them to be suddenly able to read and write in the school, or perform well. There is very little need to read. Most of it is told verbally. Many of the teachers in the remote areas feel this way. To teach something that is not really necessary for them, it is a challenge. But things are improving, just that it has to be faster.

T2 expressed a similar view.

The orang asli do not have any role models at home to follow and most of the parents were preoccupied with providing for the family. So, the main activity was finding food, collecting bamboo or other kinds of subsistence activity. So, there has to be a lot of extra effort and must be able to teach the way they want. Most of those involved with the orang asli feel they are shy and can be easily discouraged. Based on my experience, I think the teachers and volunteers helping with literacy need to be sensitive to their needs.

PG1 elaborated that

Parents hardly have time to improve literacy or teach them to read and write. Even if they want to involve, they cannot because many are not familiar about literacy needs and practices in the school. So, there is very little support, you know, from the parents. If parents don't think this is important, then the children too; it will be harder for the teachers to teach them literacy skills. The basic itself is not easy to teach. So, it is not easy to teach higher level thinking skills.

Communication in school

The participants emphasized the importance of communication in the schools. Assumptions that are made about children from mainstream schools need not be similar for children from the orang asli community. As PG1 put it:

From my experiences here and listening from the teachers, it looks like the orang asli children are shy, sometimes very shy. The way they are taught must look into language. The language could be a problem as many of them do not understand Malay well and they are being taught in Malay. Lessons are mostly in Malay. Most of them speak in the various orang asli mother tongues.

The other three participants expressed similar views and mentioned about the orang asli children being shy and withdrawn. They felt that communication issues needed to be addressed to build a better student-teacher relationship and create a conducive learning environment.

Pedagogical practices

All the participants agreed that the type of approach used to teach the children, the activities conducted, the materials used, the themes chosen for literacy practices and generally the learning styles of the students must be taken into account so that there can be more participation among the students.

PG1 made the following observation:

It can be said that it is very important for teachers to understand culture. Teachers and all those who come into contact with these students must be aware of their interests, their background, their well what they are. They have their own knowledge, expert in their own areas. No point forcing them to write when they are so shy to talk and ask and a syllabus that is not realistic. We need to suit the syllabus to what they need. Then, they can read and write and speak. They were supposed to have a special syllabus but I have yet to see it in Gua Musang. We still use the common syllabus. It is difficult. They do not have much exposure. There is very little chance to use what they learn in school. So, the school system and the way they teach is very important so that it appeals to the orang asli. They must be comfortable and happy to learn. Then we can teach them to read, write and improve on literacy.

T2 stated something similar:

They see so little of the printed material and they are almost... depend on the school. So, teachers have to plan the lessons well. Teachers who just want to follow the syllabus will probably not be able to do much as they have to teach according to the speed of the students. I think the language is another problem as Malay is not their mother tongue. They have to understand Malay but they speak the asli languages.

All participants mentioned about the pedagogical practices and how it could make a difference in children's achievement.

Attendance in schools

Attendance was another challenge that the participants mentioned. T1 said:

From what I hear from teachers so far, there are many things with classroom participation and attendance. Absenteeism is a problem, and some of them are helping out their parents with their work. So, teachers have mentioned that it is difficult if they do not come to school or if they come they are tired. They depend a lot on the school for input for school work and improve their academic level. So, if they are not there, it is a problem. Sometimes, some of those not teaching the orang asli children do not understand the problems and think that strategies that work in town areas or more areas that have exposure will work with the orang asli. This is different here.

T2 mentioned about different value systems that could have adverse effects on the orang asli performance in school.

If there is a wedding or a festival, they attend the festival and might not appear for days. I think many teachers find this challenging. Most people feel they are not doing too well and this absenteeism makes things even harder. But it is their culture, although for some it is lacking discipline.

PG1 too mentioned about the challenges the teachers faced with attendance.

Most of the time the story is the same. Teachers teach them to read and write in the school. Sometimes they are there and some are not there. Many teachers told me that it is a great

achievement if you make them follow the lesson for the time given and they learn to read and write. Most teachers I have talked to say that not all the students are indifferent, but this is a problem especially in orang asli schools that are isolated and they do not have an environment where there are academically good students, or can read and write well, or attend school regularly..

Similar to the other participants, T3 mentioned about orang asli culture and changes that are taking place:

It is no point blaming the orang asli. They have been doing things their way and we need to respect them, respect their lifestyle. We need to be sensitive, respect them, and then create awareness that they have the choice of learning, improving literacy, and ways this will help them. It is a choice open to them. We cannot run away from change. One fine day, their land will be encroached or modernization will come closer to them. Computers, you cannot stop them.

The interviews above show that there are several problems related to the improvement of literacy and academic achievement. The participants gave several suggestions to improve the level of literacy and academic achievement among the orang asli students.

It was suggested that the community be seen as a whole and that all stakeholders in the education system should be involved in efforts to improve literacy and academic achievement. This should include the village headman, parents, administrators and others. There is a limitation to what the teachers can do individually. Parents, too, could play an important part by encouraging literacy at home by providing reading materials or taking an interest in their children's reading habits. There should also be a lot of sensitivity to the students with a world view based on their own tradition, customs and culture. Any effort to improve literacy and academic achievement must recognize where they are coming from. It was also generally accepted that the students are not part of a culture that engages in highly competitive examinations or tries to acquire literacy skills and practices at a rapid pace. This could be in contradiction to their community ties which emphasise different sets of values. Thus, the approach to achieve higher levels of academic performance and literacy skills has to be sensitive to the needs of the orang asli community and the students. Four of the five participants strongly emphasised that the orang asli must be given options to build upon their existing knowledge that is meaningful to them.

The findings at this stage, at least, are not conclusive and there is no attempt to make any generalization. However, the limited data seems to suggest that there is a gap between the Primary D/discourse community of the students and the Secondary D/discourse community (Gee,1989; Gee, 2001). The demands of the school, literacy practices expected and the attitudes that would help in school academic achievement need to be addressed. If students are immersed in an environment that is far removed from the valued practices in the classroom, they would face many challenges to improve academically or achieve higher levels of literacy.

7.0 Future directions

This study is limited to five participants who have extensive experience working with the orang asli students and the orang asli communities for more than five years. Further research could be conducted using different participants such as village leaders, school teachers, students as well as members of the community itself.

CONCLUSION

In conclusion, it can be emphasized that there needs to be a high level of sociocultural sensitivity in pedagogical practices so that the orang asli have the option to engage meaningfully in literacy practices and the Malaysian education system. Appropriate pedagogical input is necessary to ensure that the indigenous peoples of Malaysia have better opportunities to improve their literacy levels and academic achievement. Malaysia hopes that every Malaysian is able to contribute to the development of the country and be a part of the 21st century education system. The orang asli cannot be left behind because of a lack of suitable and appropriate opportunities to

improve their level of education. The orang asli must be recognized for the different types of intelligence that they have, and educational efforts must be sensitive to their worldviews.

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DEVELOPING INTERACTIONAL COMPETENCE BY USING VIDEO IN AN ENGLISH LANGUAGE CLASSROOM

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ABSTRACT

The ability to interact competently has become an important skill that students need to acquire, more so in fields such as business and professional communication. The ability to achieve interactional competence in English would be an added advantage for students who use English as a second language to be successful in their studies as well as their future career. Young (2008) defined interactional competence as “a relationship between the participants’ employment of linguistic and interactional resources and the contexts in which they are employed” (p.101). The current study is part of a larger study which was conducted in a Malaysian university between 2012 and 2015. It looks at the use of a video recording of students engaged in a small group discussion to respond to a letter of complaint regarding a faulty product. The recording shows five students seated in a circle, and they discuss on ways to respond to the complaint based on a guideline. The guideline tells students on the basic format of responding to the complaint in a structured manner. Another group comprising four students who had not done this task was asked to view this video. Based on prompt questions, these four students expressed various views on the interaction between the students in the video, including their verbal and non-verbal communication skills. The four students generally expressed the view that the clippings were useful, and suggested that editing could be done so that the videos could focus on selected aspects. The option of using authentic videos for enhancing interactive competence could be further explored for pedagogical purposes.

Keywords: communication, interactional competence, videos, ESL, pedagogical purposes

INTRODUCTION

The ability to interact competently is a skill that students need to acquire; more so in fields such as business and professional communication. In a globalized world, the need for communication is even more important as nations interact and international trade continually increases. Similar to many universities in the world, the Business and Professional Communication course has been offered in Universiti Utara Malaysia, which is located in Kedah, a northern state in the west coast of Malaysia. Once students have completed their proficiency level courses, students from selected schools in the university are required to enroll for the Business and Professional Communication course. It comes under the broad umbrella of the English for Specific Purposes (ESP) course. An ESP course not only focuses on the language aspect of teaching English such as grammar, but also on the skills and genres associated with the content area of specialization (Dudley-Evans, 2001). The Business and Professional Communication course aims to fulfill several objectives. This include the ability to use appropriate verbal and non-verbal communication skills at the workplace, prepare and write business documents effectively, work in teams and conduct meetings effectively and the use of appropriate grammar in the communication process. The transferable skills that that the course hopes to impart to the students include writing business documents, oral communication skills, teamwork, business ethics and problem solving skills.

LITERATURE REVIEW

The ability to interact competently is a very important skill (Riggenbach, 1998; Olsher, 2004; Young, 2009; Walsh, 2011). Students need to acquire interactional competence not only for academic purposes and interaction with their fellow students but also for communication when they enter the workforce. The students involved in the course will need this soft skill to progress in their career as well as communicate effectively to achieve positive outcomes when they solve problems or address challenges.

Many definitions have emerged regarding interactional competence (Kramsch, 1986; Young, 2008; Young & Astarita, 2013). Young (2008) defined interactional competence as “a relationship between the participants’ employment of linguistic and interactional resources and the contexts in which they are employed” (p.101). An important aspect of interactional competence is that it is local and context specific. Young (2003) used the term ‘interactional resources’ in the realm of interactional competence to include interactional strategies. Examples of interactional strategies include turn taking, keeping the discussion on track, managing topics, and signalling boundaries. Markee (2008) emphasizes the importance of verbal communication, non-verbal communication and semiotic systems.

Many studies have been conducted on the use of videos in teaching English as a second language, improving communication, or generally in the teaching and learning process (Choi & Johnson, 2005; Barbier, Cevenini & Crawford, 2012; Sowan and Idhail, 2014). Studies have found that videos are useful and help in the learning process. A study by Choi and Johnson (2005) on the use of context-based video instruction in online courses showed positive results. They suggest that the quality of the video should not be neglected. Sowan & Idhail (2014) found that the use of videos managed to keep the students positively engaged and develop a better understanding in their field of study. Barbier, Cevenini & Crawford (2012) found that videos could help to improve student learning at the tertiary level.

METHODOLOGY

A video recording was done during a normal class session for the Business and Professional Communication course in Universiti Utara Malaysia. It is a one-semester course comprising 42 contact hours during a 14 week period. It comes under the broad umbrella of the English for Specific Purposes (ESP) course. Students were assigned the task to respond to a complaint letter regarding a faulty product. A briefing was given so that students were aware that the video would be taken and they were to conduct the group discussion as usual. Participation was voluntary. This video recording was shown to a group of four students who were selected based on the recommendation of teachers, were willing to participate and be called upon for further interviews. The four students were told that pseudonyms would be used. S1, S2, S3 and S4 were used in place of the students’ actual names. Students were told that their participation was voluntary. As a preparatory measure, they were requested to revise the relevant parts of the Business and Communication module related to group discussions and generally group work, verbal and nonverbal communication as well as the section on complaint letters. This included the format for responding to complaint letters. Appointments were made with the students so that the four of them could watch the video and give feedback or respond to the video watching session. Semi-structured interviews were conducted, but students were also allowed to express their opinions freely on the video. The four student interviews were audiotaped and transcribed. The transcripts of the students were shown to the students so that they had an opportunity to check for accuracy.

FINDINGS

The responses of the four students were thematically organized as follows.

One strand related to the positive aspects of using the video in lessons.

This video very useful. Help to see what the student is doing. When I see this, I start thinking of what I myself am doing. I can see that the students are keen to get the task done, and I can see how they are doing it. It seems that the group coordination, it is important. They are systematic, they know what they need to do and they do it. They take note of time (S3).

I realize that it is important to get moving. Important to discuss and then give ideas. It is sometimes good to add ideas and sometimes, because they are given limited time, once the thing is settled just move on. I have noticed in my group discussion for English, sometimes, we waste too much time initially, and then like speeding after that. I think I learn something about time management. Never stay too long on the same thing (S1).

It is important to respond and not just keep quiet. I think things like nodding the head or looking at the others and like showing we agree is important. This helps to get the task done. Otherwise, it becomes like just two people talking (S2).

The best thing about this it is alive. You see, hear and it is in the actual classroom. So, we are familiar with all this things. So, we take an extra interest because the video is being acted by people like us. I prefer this once in a while, maybe more often, better than always looking at the module and the printed things. It is so different from most of the current activities. Here (in the video), you get to see what is actually going on and then you comment. But when I comment, I realize some of the things I am doing start thinking about what I myself ... doing (S4).

Students expressed many views on the non-verbal communication aspects of the recording. Most took note of the way they were seated, eye contact and the way it was somehow related to the interaction. The view below is somewhat representative of what the other three students had to say.

It looks like the most active students are seated most closely and they look at one another more often. The not so active ones seem to be directing somewhere else and also less seeing of others, or on their own. They seem to be further away from the discussion. Seem to show less body language. The two very active ones are sharing more eye contact. The most active one seems to look more at others. She takes the lead and we can see this from the way she seats and the way she express when she get good ideas (S1).

Students gave several suggestions on what to do with the videos so that they can be used for the lessons. All the students said that there was a need for editing the videos.

I think it is a good idea. This is not from the internet or You Tube but from one of the classes. So, I... it is like we are familiar. But the video definitely needs editing. I think that it should be reduced the length because there are parts where the students are not discussing or reading big chunks from the letter they get. This will stop us from bored. Also, need to look at audio quality. If student speaks too softly, maybe just cut (S1).

I think that the written parts of what students are saying (transcript) would be helpful to follow (S4).

When the video is shown, must make sure that it is loud and clear. Otherwise students will lose interest. But I like certain parts when students follow like tag style and then we see more ideas. So, it becomes interesting(S3)

Another aspect which was mentioned by the students was about the silent student. Three of the students commented about the silent student while one mentioned about the student and said that it is normal in any group to have people who want to say anything. The excerpts are given as below.

I notice that there is one student who is very silent throughout the session. The student does not like want to say anything. Almost like just listening, maybe not, and just like writing sometimes, and not really a part of the whole thing. Everyone is expected to take part and in a team, everyone should do their part. Really, I don't like this and I would get very irritated if someone just does nothing there (S1).

There is one who hardly wants to say. It is hard to say why this person is like that. Maybe this person is more on the writing and not so much on the talking type. But this is not the way to do it, because other are talking and this person is just sitting there not talking. So, maybe as I said not the talking type or only wants to get it written...or maybe English is not so good when talking so does not want to talk (S4).

It is very noticeable, this person remains silent most of the time and does not want to say much. I have experience with this type. All he does is nod his head and smile. Worst, finally yawning (S3).

There were also other views which are given in the following excerpts.

I think if we can access the recording, we can get an idea about what is effective for group work. The advantage of the video is that we can rewind, pause or fast forward and use it for our own uses. If there are interesting ways of telling ideas, we can rewind, fast forward or pause (S3).

We can learn many things about what to do and what not to do from the video. There are so many things going on, so I look at all of them. The module talks about non-verbal communication and verbal communication, but you actually get to see what others have done as it is (S2).

The study above shows that the video has the potential to be a useful teaching tool so that students are engaged in the learning process and are able to take a critical view of what other students have done. It helps to create awareness of the strengths and the weaknesses of their fellow students. The use of the video seems timely as the students belong to a generation that closely connected to different types of media, and videos are one of them. The use of video recordings of students enrolled for this course needs to be explored further. Based on this limited study at least, it can be seen that students have given feedback on the possibility of using videos and what can be done to enhance the teaching of English. Nevertheless, it would be accepted that the current group of students are digital natives. While using video as a teaching tool can help to engage students, an assumption cannot be made that a single method of delivery will suit or help to engage all learners.

DISCUSSION

One major finding that emerged in this study is that video viewing of students enrolled for the course felt that the videos could contribute in a positive way towards interactional competence. Students have voiced their opinions that they were able to see the actual processes that were taking place during the interaction rather than just reading about it in the module. They said that what made the videos particularly relevant was that it was related to students like themselves actually organizing their time, discussing issues and getting the task done according to guidelines. In other words, they were able to see in virtual reality form what would otherwise be normally explained using words. The benefits of using videos were also evident in other studies (Choi & Johnson, 2005; Barbier, Cevenini & Crawford, 2012; Sowan and Idhail, 2014).

Another important point that students raised was the importance of video in looking into the strengths and weaknesses of the interlocutors. Videos can be embedded in the learning process so that students are able to not only assess the verbal communication but also the non-verbal communication that is taking place. Sometimes, there is a tendency to emphasize the written output but neglect important aspects of non-verbal communication.

Video based learning has the potential to play a more central role in the teaching of this course, that is, Business and Professional Communication. It helps to meet the current needs of students, as well as recognize future needs. For example, the need for eye contact could determine whether the other students respond positively to a viewpoint or do not give it the attention it deserves. The need for appropriate non-verbal communication would be important in the future workplace as well. Video viewing can help students view others and improve their own communication, be it verbal or non-verbal. Many of the positive attributes of the video

Teachers can also tap on video-viewing as they can replay it many times, or focus on certain aspects they wish to emphasize about effective interactional competence. The videos can also be viewed independently by students. However, the quality of the video should not be neglected, as suggested in a study by Choi and Johnson (2005). Guidelines could be given on what to do when viewing the videos. For example, students can observe the sorts of body language of the students, eye contact or ways of showing agreement. This will help them to improve their communication skills ((Riggenbach, 1998; Olsher, 2004; Young, 2009; Walsh, 2011).

CONCLUSION

The study has shown that there are many positive views that favour the use of video-based learning. The use of the video, as seen in this study, provides useful insights on ways to use it that appeal to students. The use of a video taken with a group of students who have enrolled for the same course enables students to relate more closely to the task-based activity. In this case, it is responding to a complaint letter. Perhaps, instructors might

want to consider the use of recorded videos of their students to be included in courses, as an addition to existing teaching materials. However, this requires further investigation as the study only provides some pointers on the use of this type of instructional media based on a small group of students.

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TOURIST'S PERCEPTIONS OF DESTINATION IMAGE: INTERNATIONAL VERSUS DOMESTIC TOURISTS

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Abstract

Tourism has become one of the most important service industries in the global economy. Thus, understanding the patterns of tourist behavior is vital for destination managers in order to attract potential tourists to specific destinations. Destination image is seen as a key component in creating and managing of a distinctive and appealing perception or image of the destination. However, cultures and backgrounds of tourists play an important role in the formation of multiple destination images. These papers then look at the concept of tourist destination images and determine differences in the image of a town in Thailand between domestic and international tourists. A convenience sample of 1,100 tourists was surveyed. The results show that there are significant differences among these tourists in terms of destination image, marketing tools for destination image formation and tourists' future behavior (i.e. intention to revisit and recommend). Furthermore, the unique image had the largest impact on the overall image formation.

Key words: destination images, component of destination images, international tourist, domestic tourist

INTRODUCTION

Tourism is seen as a tool to stimulate broader economic growth and as a key component of economic development generating jobs and furthering incomes. Thus, many governments around the world consider its tourism industry vital on two key levels. Firstly, on the macro level tourism is seen to promote economic growth by generating foreign exchange revenue, as well as increasing various other forms of government income. On a micro level tourism is expected to facilitate job creation, income and revenue distribution, lead to more balanced regional development and ultimately improve quality of life among regional residents (Liu & Wall, 2006). As such, each destination is competing for the tourism market, especially on promoting destination image as it has a direct impact on travel decision making process (Beerli & Martin, 2004; Chen & Tsai, 2007; Chi. & Qu., 2008).

A number of researchers viewed that destination image is one of the most important elements that influence tourist behavior (Bonn, Joseph, & Mo Dai, 2005; Furnham, 1985; Sérgio Dominique Ferreira Lopes, 2011). It can play an essential role in destination choice matters, and the ultimate goal of any destination is to influence possible tourists' travel-related decision making and choice through marketing activities (Lee, O'Leary, & Hong, 2002; Qu, Kim, & Im, 2011). Mostly, destination images are based on tourism attributes, functional consequences and psychological characteristics that tourists associate with a specific destination (Bonn, et al., 2005; Echtner & Ritchie, 1991). However, different tourists hold differing views when it comes to destination image. Moreover, existing literature has showed that culture and backgrounds of tourists play an important role in the formation of multiple destination images (Beerli & Martin, 2004; Thurot & Thurot, 1983). Tourism managers then need to understand existing images that tourists already possess about their destination and employ differing strategies to alter or maintain these images to different groups of tourists. As Woodside and Lysonski (1989) suggested that one approach to a successful positioning strategy is to match benefits provided by a destination with benefits sought by a target market. Nonetheless, destinations have used the same destination images to attract both domestic and international tourists. Therefore, the purpose of this study is to identify tourism image of a destination in Thailand held by domestic and international tourists and determine differences in the destination image among tourists with different demographic profiles in order to design effective tourism marketing strategies. The result can improve the image of a destination, so tourists will have more tendencies to visit the destination and intention to revisit will be increased. Following this introduction, the paper presents a literature review and the conceptual model that underlies the research. This is followed by a presentation of the methodology of the study. Finally, the results of the study are discussed.

LITERATURE REVIEW

Literature review and conceptual model

Destination Image

Tourism has become one of the most important service industries in the global economy. Therefore, many countries try to find attractions in order to market the destinations that affect the tourists. Image then is seen as an important factor in marketing destination (Beerli & Martin, 2004; Echtner & Ritchie, 1991; MacKay & Fesenmaier, 2000; Marino, 2008). This is because image is an important factor for tourist's decision making process as it comes after people's perceiving the products and services that tourism sector presents (Aksoy & Kiyici, 2011).

The term "destination image" became widely acknowledged from about 1970s, along with array of related terms including "image perception" (Hunter & Suh Yong Kun, 2007; Kim, McKercher, & Lee, 2009), "perceived image" (Beerli & Martin, 2004; Chen & Hsu, 2000; Pešek & Činjarević, 2014), and "tourist image" (Ahmed, 1991; Bramwell & Rawding, 1996). However, what all have in common refers destination image as the opinion of people about a destination. Nonetheless, the term "image" has been used with a variety of meanings including impression (Bramwell & Rawding, 1996; Crompton, 1979; MacKay & Fesenmaier, 2000; Phelps, 1986), perception (Coshall, 2000; Hunt, 1975; Phelps, 1986), attribute, idea and belief. The most commonly used, as well as ultimately most encompassing definition of image is that of Crompton (1979, p.18) referring to image as "the sum of beliefs, ideas, and impressions that a person has of a destination". Many researchers (e.g. Della & Micera, 2007; Kotler, Haider, & Rein, 1993; Watkins, Ahmed, & Crispin, 2006) supported this idea and further viewed destination image as the mental structures that integrate the elements, the impressions and the values that people have about a specific place. Aksoy and Kiyici (2011) added that the image that tourists have about the destination is the main factor which determines the future of the destination. In order to positioning strategies, it is important to create a new positive image or to strengthen the existing positive image. For this reason, observing image that affects tourist's destination choice has great importance in view of destination marketing.

In addition, researchers have explained destination image concept in different way and their constructs are extensively applied to measure destination images. For example, Boulding (1956) purposed three components of destination image as cognitive, affective and conative. These three components have been examined in the context of both pre and post-travel image (Baloglu & McCleary, 1999; Dann, 1996) and destination positioning (Pike, 2004). Echtner and Ritchie (1991) defined destination image as a combination of the destination's attributes and the impressions made by that destination and viewed that destination image consists of three key components: attribute-holistic, functional-psychological and common-unique dimensions. Moreover, Baloglu and Brinberg (1997) suggested emotional, prejudicial and imaginal aspects of image. Baloglu and McCleary (1999) further addressed the model with cognitive image, affective image and overall image. While each of these approaches provides valid perspective, the theoretical basis to this study turns on Echtner and Ritchie's framework. This is due to the fact that it uses structured and unstructured methodologies for operationalization of all components of destination image. Three open-ended questions, which capture holistic functional and psychological elements of destination image, as well as its unique component, were developed by a panel of academic experts and practitioners in the tourism field. Moreover, it serves to capture many of the destination characteristics and allows for both the emotional thoughts (such as beliefs, ideas, impressions, values and behaviour) of individual and the destination's overall image.

Components of Destination Image

Echtner and Ritchie's much-cited work on destination image divided image into three main components: attribute-holistic, functional-psychological and common-unique dimensions (Figure 1).

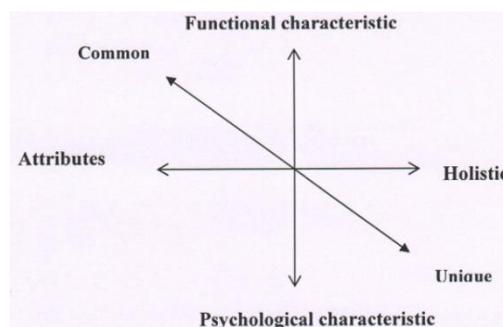


Figure 1 The components of destination image (Echtner & Ritchie, 1991, p.43)

According to Echtner and Ritchie (1991), attribute is the pieces of information people processes and stores in their mind about any tourism product. This could be climate, accommodation, friendliness of the people of the host country, while holistic images represent the total impression of a destination. Functional continuums are those characteristics of a country that are observable and measurable (physical characteristics-low price, poor roads), whereas psychological continuums are less tangible and are difficult to measure (atmosphere or mood of the destination). Common characteristics are those that are shared by most destinations. Unique is the features that distinguishes a destination from other similar choices. In branding destinations, unique image can be used for differentiating through similar destinations in the tourists' minds and envisages the destination overall image (Qu, et al., 2011).

METHODOLOGY

A cross-sectional research design is used, meaning that a sample of each 500 domestic and international tourists visiting Phitsanulok province, Thailand, as it was very popular and can attracts lots of tourists, was taken at a certain point of time (December 2013 – February 2014). The study included all domestic and international tourists that have visited the place whether they visited for the day or stayed more nights.

To measure the components of destination image: attribute, holistic, functional, psychological, common and unique – a combination of structured and unstructured methodologies were used. A series of open-ended question that capture the holistic components of destination image and a reliable and valid set of scales to measure its common attribute based components have been pre-selected by the literature review. In order to make the list of attributes to fit each study's own purposes and objectives, the list was complemented by a pilot investigation conducted with each 15 domestic and international tourists. As a result of the pilot investigation, a list of 27 attributes was created for the questionnaire.

To carry out this research, a personal survey was conducted by means of a structured questionnaire. The sample for this study consisted of 1,000 tourists. Non-probability samples was useful for obtaining information about tourists' opinions, motivations, behaviors and demographic characteristics (Wicks & Baldwin, 1997). Participants in the survey were asked to express their opinion about a given tourist destination they had already visited through a series of attributes (6-point Likert scale) and to answer a series of questions related to it. The demographic profile of domestic tourists showed a gender distribution with 32% male and 42% female. In terms of age, 41.81% of respondents were between 18 and 29 followed by 24.90% who were between 30 and 49. The respondents were highly educated; 38.13% of them had been to university and 20.34% of them were high-school graduates. For international tourist, there were 53.80% male and 38.90% female. 36.50% of respondents were between 30 and 49 followed by 29.10% who were between 18 and 29. Considering the educational conditions of the respondents, 39.26% of the respondents had attended college or university. The statistical methods for data analysis included descriptive statistics. The open-ended questions were analyzed by the free elicitation of verbal description technique.

FINDINGS AND DISCUSSIONS

There were 27 structured attribute questions used to measure the images of Phitsanulok province. Five opposite items were reversely coded and missing values were filled with average scored. For domestic tourists, the results in Table 1 indicate that: there are many places of interest to visit in Phitsanulok (5.59), it is attractive (4.95) and offers a lot in term of natural scenic beauty (4.92). However, the Phitsanulok government should pay close attentions to creating tourism activities. In terms of international tourists, the results show that: local people are friendly (4.76), Phitsanulok has a pleasant weather (4.52) and it is a good place for history, heritage and culture (4.47). However, they found difficulty in communication with local people.

Table 1 The Functional-Psychological Attributes Scores

Items	Rank	Domestic \bar{x}	Rank	Inter.
There are many places of interest to visit in Phitsanulok.	1	5.59	7	4.39
Phitsanulok is attractive.	2	4.95	8	4.38
Phitsanulok offers a lot in term of natural scenic beauty.	3	4.92	5	4.43
Highways and roads are in good condition.	4	4.91	13	4.29
Phitsanulok is a good place for history, heritage and culture.	4	4.91	4	4.47
Phitsanulok's tourist attractions are well-known and famous.	5	4.90	17	4.23
It is easy to get around in Phitsanulok.	5	4.90	11	4.31
In general, Phitsanulok is a safe place to visit.	6	4.81	5	4.43

Local people are friendly.	7	4.78	1	4.76
Phitsanulok is a good place for natural destinations.	7	4.78	12	4.30
Good quality hotels are easy to find.	8	4.77	6	4.42
There is interesting local cuisine to sample.	9	4.74	8	4.38
There are many opportunities to engage in events.	10	4.70	15	4.27
Good quality restaurants are easy to find.	11	4.66	14	4.29
Phitsanulok offers few opportunities to learn new things*	12	4.63	19	4.22
Good tourist information is readily available in Phitsanulok.	13	4.61	18	4.23
Phitsanulok offers many opportunities for shopping.	14	4.59	10	4.33
Phitsanulok has a good nightlife.	15	4.58	16	4.24
Lifestyle and customs are quite similar to ours*.	16	4.45	22	4.03
Phitsanulok has a pleasant weather.	17	4.39	3	4.52
There are many opportunities to engage in adventure activities.	18	4.35	20	4.21
It is difficult to get good service in restaurants and hotels*	19	4.30	24	3.47
There are many opportunities to engage in sport activities.	20	4.29	21	4.18
The city is unappealing*.	21	4.26	2	4.63
Phitsanulok appeals more to adult than children.	22	4.07	9	4.34
There is a high risk of illness due to dirty conditions*.	23	3.86	25	3.64
Many people speak English in Phitsanulok.	-	-	23	3.57

*These items were reverse coded for data analysis.

Open-ended question analysis of Phitsanulok's Images

The purpose of using open-ended questions was to provide detailed holistic or specific impressions. The most frequent responses to the three open-ended questions were summarized in Table 2. In the first question, "What images or characteristics come to mind when you think of Phitsanulok as a vacation destination?" For Thai tourists, this recorded functional characteristics of Phitsanulok as tourism sites (86.74%), followed by tourism activities (7.83%) and food (5.42%). Question two focused on "mood or atmosphere of tourists while visited the destination". The results show that happy (46.89%), fun (30.12%) and relaxing (11.1%) were frequently used. The third question asked tourists to list any negative image of Phitsanulok. It indicated that traffic congestion (64.64%), weather including hot, humid (16.16%) and some dirty conditions (12.12%).

In terms of international tourists, it was found that tourism sites (53.19%), friendly people (24.03%), tourism activities (23.40%) and food (23.40%) were frequently mentioned. Themes identified within question two included relaxing (27.88%), happy (26.92%), and peaceful (21.15%). The most frequently cited negative image for foreigners were mosquitoes (16.29%), nightlife (12.35%), food including too hot and spicy (12.35%), barrier in communication (11.79%), some dirty conditions (11.79%), weather (11.79%) and traffic congestion (11.79%).

Table 2 Most Frequent Responses to Open-ended Image Questions

Domestic Tourists	International Tourists
1. What images or characteristics come to mind when you think of Phitsanulok as a vacation destination? (n=332 Thais, n=94 Foreigners)	
Tourism sites (86.74%) Tourism activities (7.83%) Food (5.43%)	Tourism sites (53.20%) Tourism activities (23.40%) Food (23.40%)
2. How would you describe the atmosphere or mood that you experienced while visiting Phitsanulok? (n=332 Thais, n=104 Foreigners)	
Happy (46.89%) Fun (30.12%) Relaxed (11.1%) Peaceful (4.34%) Safe (2.93%) Attractive (2.79%) Proud (1.83%)	Relaxed (27.8%) Happy (26.92%) Friendly (24.13%) Peaceful (21.15%)
3. What are your negative images about Phitsanulok? (n=161 Thais, n= 198 Foreigners)	

Traffic congestion (64.64%) Hot weather (16.16%) Some dirty conditions (12.12%) Over price (4.05%) Bad service (3.03%)	Mosquitoes (16.35%) Boring nightlife (12.35%) Spicy food (12.35%) Language barriers (11.79%) Some dirty conditions (11.79%) Hot weather (11.79%) Traffic congestion (11.79%) Poor information (11.79%)
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Figure 2 and 3 present Phitsanulok images as a travel destination (based on Table 1 and 2). In the quadrants, images with percentages were extracted from open-ended questions and the others are from the six-point scale items.

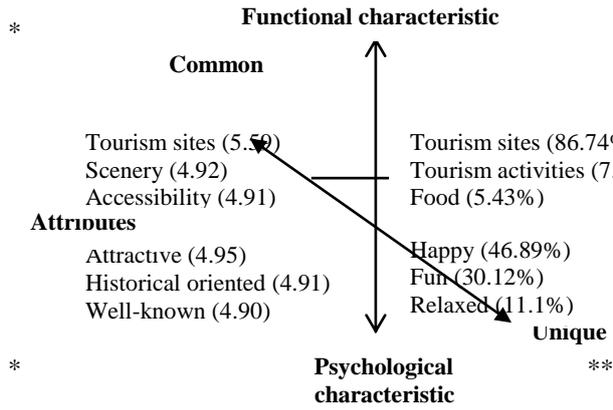


Figure 2 Domestic Tourists' perception on components of Phitsanulok's image

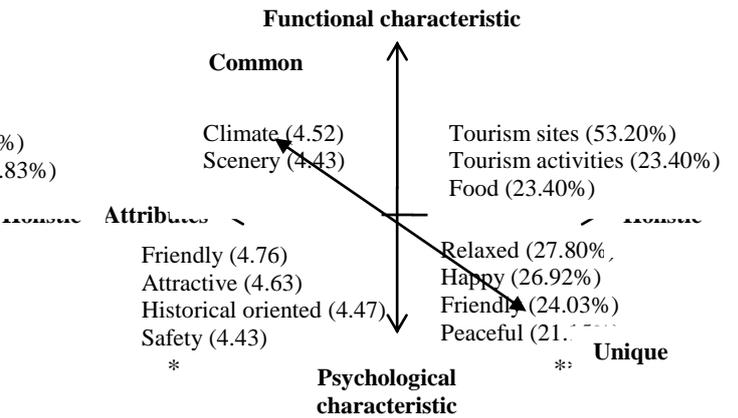


Figure 3 International Tourists' perception on the components of Phitsanulok's image

* Information in quadrant supplied by scale item

** Information in quadrant supplied by open-ended question

It can be seen that tourism sites, tourism activities, scenery and food are the key Phitsanulok's images for both domestic and international tourists. This may be because Phitsanulok is a vast area with rich tourist resources including unique natural features, beautiful landscapes, historical and cultural attractions, and good recreational opportunities. Lumsdon (2000) explained at this point that destination images are a result of tourists' perception of the destinations' attributes and have a strong linkage with tourists' destination choice. Moreover, "friendliness" of local people plays an important factor of the destination image, especially for international tourists. It can be seen that while international tourists mentioned "friendliness" as one of the main destinations images, domestic tourists did not mention this image. Harris (1972) and Crompton (1979) viewed that "hospitality/friendliness of the local population" is a very important attribute of the destination image as local people's positive attitudes toward tourism can lead to supportive tourism behavior such as local participation in tourism development and the conservation of resources on which tourism depends (Ap, 1992; Eagly & Chaiken, 1993; Lepp, 2007). In addition, Etchner and Ritchie (1991) further asserted the importance of holistic and unique images in tourists' mind as the chances of being selected is reduced if they lack distinctive quality in their product benefit. For this research, it was found that Phitsanulok's uniqueness lies in "Relaxed" and "Happy" dimensions for both tourist groups. Thus, the town can promote the place using appropriate holistic imagery, both functional and psychological, in the mass media like Internet, TV and tourism reports. This will help to increase tourists' perception of destination and their decision on destination selection.

However, people have different opinions about the same destination and observing the changes in the perceptions of the tourists from different cultures and nations is also important in terms of understanding the image that the potential tourists have about the related destination and choosing the right name and adjectives for the target market (Prebensen, 2007). It can be seen that while accessibility, both intracity (4.90) and intercity (4.91), plays an important attribute for domestic tourists, it was rated lower by international tourists (4.31 and 4.29). This may be due to the fact that most international tourists visit the town with the tour operator who manages everything for them. However, this suggests that there is a need to improve the town's transportation that runs from the downtown center to popular visitor sites including historical districts, entertainment facilities, food service establishments and lodging properties. According to a content analysis, there is the additional issue

of language barriers that may be causing some interference for international tourists. This suggests that only a very limited number of attractions cater to international tourists.

CONCLUSION

The study proposed a theoretical model of destination image from a destination in Thailand. The model was extended from Echtner and Ritchie's framework of destination image. The results showed destination image exerts a mediating role between the three image components. Results of this study indicated that for destinations to be successful and effective in promoting tourism trade, they must establish a positive and strong brand image to increase repeat visitors and to attract new tourists to the destination. Thus, tourism destinations need to provide favorable experiences to tourists which will create a positive image and recommend the place to others, in turn helping potential tourists develop a favorable image that affects destination choice.

Although it is not possible to control all the elements contributing to the shaping of image of a destination, it is possible to manipulate some of them by advertising and promoting tourist attractions, organizing cultural event in towns that appeal to tourists, administering service quality provided by tourism infrastructure such as restaurants, café, and tourist centers. The results of this investigation provide important implications for strategic image management and can aid in designing and implementing marketing programs for creating and enhancing tourism destination images.

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