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Getting Learners to write beyond the single word and phrase: Reciprocal Teaching and the Online Learner

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Abstract: The present study aims to investigate the online reading strategies employed by 45 second language learners in Sarawak. Three online reading modules were designed to collect data. Reading comprehension strategies were grouped into four categories: question and answer, clarification, summarizing, and prediction. The quantitative results reported that most students relied on compensation strategies with few being able to demonstrate effective use of higher order thinking skills. However, the qualitative data revealed that focused questions enabled students to apply higher thinking skills and produce learning outcomes successfully.

Keywords: online learning, clarification, summarizing, comprehension, noticing.

Introduction

Globalization and the need to produce a technologically literate workforce adept at using the tools for the information age has caused nations to make major changes to its education system (Pandian 2002). In 1997, Malaysia introduced the Smart School Project (SSP) through one of its seven flagship applications of the Multimedia Super Corridor,

where the existing education syllabus was reused with changes made to the approaches and teaching techniques, which spanned from the traditional to the latest in information technology with particular emphasis on Mathematics, Science and English. Though futuristic at its time, the SSP was not implemented until 2000 due to a number of constraints and despite all its investments, there is concern that teachers' and learners' use of technology have not changed over the years. In 2012, the Malaysia Education Blueprint (2013-2025) was launched and this was yet another move to embed and develop 21st century skills where:

...every child will be fully literate and numerate ... with minimum operational proficiency in both Malay and English and ICT skills. (In this matter) students who fall behind will receive remedial coaching until they are able to return to the mainstream curriculum. (MOE 2014, E9-E10).

At this juncture, it must be noted that while the aim and intents remain noble and timely as they aim to equip students with essential communicative and multi-literacy skills crucial for the increasingly diverse world which they inhabit; as far as good intentions go, it cannot be ignored that when major realms of aims, objectives, beliefs and social activity shift in a society, the roles, responsibilities, teaching practices and learning styles of teachers and learners on the ground need to shift as well. In this matter, the teaching of reading in schools comes with responsibilities and in addition to learning the rudimentary skills in reading, students need sufficient tools to read widely in English and to master the Knowledge economy. As such reading classrooms that use technology will play a crucial role in terms of promoting independent and life-long learners. In the words of Becker, H. J. & M. M. Riel, "computers have become a "valuable and well-functioning instructional tool" (29) in classrooms when teachers: (a) have access, (b) are prepared, (c) have freedom in the curriculum, and (d) hold personal beliefs aligned with a constructivist pedagogy. Though not all teachers work in schools in which all of these variables exist, a number of

studies suggest that the computers are making a change in the way teaching and learning is happening worldwide. In fact, data from the US Department of Education (2003) revealed the majority of teachers (85%) to be "...somewhat well-prepared to use technology for classroom instruction. Similarly, research in Malaysia suggests that teachers are willing to give a try to computers in their classroom (Norhayati 2000). However as pointed out by Pillay (1998), disparity between learner competence along the lines of socio-economic status and between urban and rural schools will continue to contribute towards general deficiency in the teaching and learning of English so long as English remains a subject, unless policies change. However, the situation might not be that bad, and as indicated by Pandian (2002):

The smart school Project which may seem ambitious and expensive to some quarters will at least be able to acquaint young minds from urban as well as rural areas with the advantage of tapping the resources available on the World Wide Web. In terms of methodology, the Smart School ELT programme plays a crucial role in developing manpower capable of critical and creative thinking. (51)

Thus, it has become increasingly evident that the first three features of Baker's suggestion might apply to Malaysian schools considering the nation's investment in technology in schools and training for teachers. Though in terms of freedom in the curriculum it may be harder to measure, recent legislation and policy statements reveal a strong commitment by the Malaysian authorities to get school administrators, teachers and students to use online resources (MOE 2014). So, while the first three conditions identified by Becker (2000) may have been met, the fourth (teachers belief) remains blurred since the three have more to do with a system where the changes can be addressed in an incremental fashion without changing existing structures but the fourth components, as pointed out by Ertmer (2005), looks at the teachers' fundamental beliefs, their readiness to embark on

new teaching methods, and this requires new ways of seeing and doing things. In fact, as suggested in the study of Norhayati (2000), chief reasons for Malaysian teachers being reluctant to use computers are: (a) teachers do not have enough time to prepare lessons using computers, (b) unreliable computers, (c) lack of knowledge about computers and software, (d) software that were far too sophisticated for their students, and (e) fear of losing control of the classroom.

Teaching Reading

Teaching reading to less proficient second language learners (henceforth L2) comes with added responsibilities particularly when adult learners, despite being of average intelligence, continue having difficulty comprehending text in the target language. These students, when pressured to read academic text, often end up selecting ineffective and inefficient strategies that impede rather than promote comprehension (Wood, Motz & Willoughby 1998). Prolonged pressure on young adults to perform in the language classroom can result in learners becoming frustrated and disillusioned. Reading research meanwhile suggests that many L2 learners struggle to read due to lack of sight-word knowledge and unfamiliarity with register (Laufer 1997) or due to over-reliance on low level reading strategies (Dreyer 1998) which often contribute to students failing to achieve the basic skills necessary for success in the highly demanding education system (Chen et al. 2004). In this matter, nations like Malaysia have cause to be concerned given its aspirations to ‘become an industrialized nation’ and tandem need to attain a literacy rate of 100% by 2020. While there are positive indications that the literacy rate in Malaysia has increased from the days of the World Education Report in 1993 where Malaysia was identified as having one of the lowest literacy rates (78.4%) compared to her other Southeast Asian neighbors, Malaysia has through some conscious efforts moved on to 85% literacy (Inderjit 2014). Nevertheless in 2009, 44% of Malaysia's 15-year-olds were found to have failed to meet the minimum proficiency levels required for Reading based on the 2009 PISA ratings. In fact according to the Malaysian Education Blueprint, the average 15-year-olds in Singapore, South Korea, Hong Kong and Shanghai are said to be capable of performing “as though they have had 3 or more years of schooling”

compared to 15-year-olds in Malaysia (MOE 2014). Given Malaysia's continued dismal performance in PISA over the last four years, it has to be realized that teaching reading in the L2 classroom is not only about the matching of sounds to words, asking students to go through selected reading passages, getting them to respond to questions that follow the texts, and getting readers to read and memorize in order to ace in examinations (Dreyer & Nel 2003). Rather, reading is also about teaching students to apply useful strategies, getting students to monitor their understanding and making sense of new meanings through active learning (Yu et al. 2010). This study is about getting teachers to teach students to use multiple strategies during the reading process through the use of reciprocal teaching in the online environment.

Reciprocal Teaching

In getting less proficient learners to read and comprehend text on their own, reading research advocates the employment of multiple strategies. Interestingly, many of these strategies happen to be those used by competent learners which include activating learner's background knowledge (Dole et al. 1991), summarizing the text (Armbruster, Anderson & Ostertag 1987), and generating questions to capture the main idea of the passage (Rosenshine, Meister & Chapman 1996). Palinscar and Brown (1984) meanwhile describe Reciprocal Teaching (henceforth RT) to be a teaching approach "where the tutor/teacher and student [take] turns to lead a dialogue centered on pertinent features of the text" (117) with the teacher essentially providing the "expert scaffolding" (Vygotsky 1978) followed by students who gradually learn to take turns in assuming the role of the expert in demonstrating the correct usage of strategies. In terms of remedial intervention, RT has been found to lead to significant improvements especially when less proficient learners are engaged in four strategies, namely, predicting, questioning, clarifying and summarizing (Fung, Wilkinson & Moore 2003; Yang 2010). Similarly, Png (2010) used the RT approach for a group of remedial learners in Singapore in the presence of the teachers and discovered that teachers do see RT to be a suitable and valuable intervention tool. Alverman (2002) attribute its relevance to learners to direct strategy instruction

which generally go well with teachers. Soto (1989) adds that through the RT dialogues, teachers are in a better position to monitor student's understanding of texts, capitalize on students' background knowledge and enhance students' reading comprehension ability. In terms of online learning Yang (2010) adds that online RT platforms are becoming increasingly relevant given that well designed online platforms provide additional opportunities for students to retrieve, research, modify and enhance knowledge according to their needs and also allow teachers to track and get a better understanding of individual learner goals and needs. Given the increased attention paid to online classrooms, online RT lessons can create valuable teaching moments for teachers to engage, involve and scaffold learners' progress and help them across the threshold to the next level of reading ability. In other words, given the rise in CALL and MALL and the need to prepare all learners for the classroom of tomorrow, online RT should be seen as the next platform for integrating scaffolding tools that would prepare both proficient and less proficient learners for the next realm of discovery learning and reading pleasure.

When discussing online RT approaches, two notable studies come to mind. Png's small scale design of an RT methodology for the Singaporean classroom provides the basic structure for a possible intervention program for less proficient L2 learners in South East Asia. In Png (2010) the struggling learners are taught by a tutor or group leader to work with a number of reading strategies before the learners move on to learn to work on their own. In this study 71% of the teacher participants who took part in the eight sessions believed the program would be useful in class and were willing to give it a try. Teacher belief is important at this juncture because teachers generally happen to be a cautious lot and despite the widespread popularity and applicability of technology and educational approaches, regardless of training and opportunities, when it comes to actual classroom practice many teachers are more likely to agree with the Irish quote, *'a new broom may sweep clean but the old broom knows the corners.'* So, to convince more teachers to actually use RT in their classes, there is much need for more conclusive evidence for the effectiveness of select approaches. As for the online environment which is seen as the classroom of tomorrow,

Yang's (2010) design of an online RT and learning system for adult learners demonstrates how RT can be transformed from the traditional classroom environment to the online classroom without neglecting key reading strategies (e.g. predicting, clarifying, questioning, cause and effect and summarizing). The availability of online application tools such as the dialogue boxes, voicemails, iclouds are just the tip of the iceberg for learners to read, interact, collaborate and think about what they have read.

The Study

This paper reports on the design of an online RT and learning system aimed to support teachers and learners in a Malaysian Secondary school. The study takes place in a setting where the key players have the capacity and access to ICT in the classroom. The students practiced reading online through the use of multiple reading strategies such as predicting, clarifying, questioning, cause and effect and summarizing. The activities were supported by two online presentations and two face to face activities which include: (a) dialogue box, b) a social networking website¹, (c) forums, and (d) annotations. While a fully computer assisted learning environment would have provided useful evidence for identifying the reading difficulties and helped the researchers further in monitoring the comprehension process by representing reading problems visibly and in verbal or written forms, the situation on the ground was somewhat different. As suggested by Baharun, Norhayati & Porter (2012), it has to be noted that for Malaysia, while the foundations for successful technology integration appears to be in place, high level technology use in classrooms continue to remain low. Even with the Smart Schools ELT program which is seen as the forerunners where their teachers and teaching environments will “play a crucial role in developing manpower capable of critical and creative thinking” as well as “promote independent and life-long learning (Pandian 2002), most Smart School teachers when interviewed, admitted that though the students were familiar with a number of Web

¹ For this study Yammer.com was used.

2.0 tools, most language activities were largely confined to downloading information, working with information for class projects, annotations, and creating PowerPoint presentations since funding was scarce in some instances. Therefore, to monitor the learners' online reading performances, due to the online approach and to investigate its impact on the reading ability of less proficient language learners, three research questions were addressed as follows:

- (1) Is there a change in learner's pre and post test comprehension scores due to the use of Online RT platform?
- (2) What are the problematic and helpful strategies for less proficient learners when using multiple strategies in RT?
- (3) What can be regarded as less proficient learners progress rate in the online intervention program?

The result presented in this paper is part of an ongoing research and therefore will provide only the preliminary findings for the first module.

Method

Participants: Forty five secondary school students from a Smart School in Sarawak were invited to participate in the 2-day reading workshop (19 male and 26 female). There were four sessions, with each session lasting for 1 hour. The students came from three classes (A=15 students, C=15 students and T=15 students).

The students were 15 years of age, familiar with online learning activities, social networking sites and capable of interacting online. All students had been exposed to *Edmodo*, *Facebook* and a number of *Web. 2.0* tools in the class. During the preliminary interview, most students indicated that they enjoyed surfing the net, reading information via *Facebook*, enjoyed online games but did not engage in much online reading. As for language used at home, half the students (50%) in Class A indicated Malay as the preferred language used at home, while 50% in Classes T and C highlighted English as the preferred mode of communication at home. Incidentally, English is considered as a second language in Malaysia. The others ticked their respective mother tongues

to be their preferred language. Prior to the intervention, all participants took a reading diagnostic test (Nation Vocabulary Size Test Levels 1-3, <http://www.victoria.ac.nz/lals/about/staff/publications/paul-nation/Vocabulary-Size-Test-14000.pdf>). The purpose of the test was to establish their word knowledge and reading ability and it had been widely used in vocabulary and reading research. Each test comprises 10 items. The results are as indicated in Table 1.

Table 1: Word Knowledge and Reading Ability of Subjects

Groups		1K		2K		3K	
N		<i>Mean</i>	<i>SD</i>	mean	<i>SD</i>	mean	<i>SD</i>
A (Proficient)	15	8.73	.799	9.07	.704	8.00	1.363
C (Less Proficient)	15	8.07	1.163	8.20	.862	7.07	1.387
T(Proficient)	15	9.07	.704	9.33	.724	8.67	1.397
Total	45	8.62	.984	8.87	.894	7.91	1.505

All students in Groups A, C and T obtained a score of 80% and above for both the first one thousand words and two thousand word level suggesting that the students were capable of reading general text written by L1 speakers of the language (authentic text), while students in group C obtained less than 80% for level 3 suggesting that the latter would have difficulty with words from the first three thousand words or near academic text. Each group was fairly homogenous though Group C's word knowledge for the first 2K words was much lower compared to the other two groups. Group A was taken as the control group while C and T were taken as the experimental groups because Group C was classified as the less proficient group based on their mean scores for all levels which was by far the lowest while Groups A and T were categorized as proficient readers for the purpose of this study.

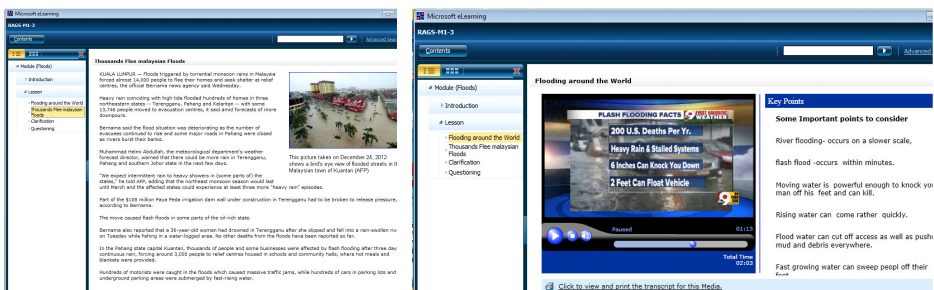
Reading Module

Three RT modules were created for the study. Each module contained a 500-word text (T1) based on a topic from the existing textbook and a parallel online reading text of similar topic with video was selected. For the purpose of this study, the topic confined to flashfloods was analyzed. All words in the text were kept to the one

thousand word level to ensure that learners did not have to break their flow of reading.

A reading module using T1 and a series of task sheets on the various reading strategies (e.g., prediction, clarification, questioning and summarizing) was designed by the research team. The print module was used by the control group A. The online RT teaching/learning system was designed based on the materials from the print module using the free software LCDS software. The stand-alone module was used alongside the reading module for Groups C and T (Refer Fig. 1 (a) & (b)).

Fig. 1: Architecture of Reciprocal Teaching System for Remedial Learners.



(a) Online Text

(b) Clarification Strategies

Data Collection Procedure

All groups were taught by two trained teachers who have taught for a minimum of one year. Group A worked on the print modules on their own without access to technology. Groups C and T were taught in a different class by the second teacher. The students in Group C and T had access to computers, were allowed to interact in groups, and could communicate online. However, due to the lack of printing facilities, the students were permitted to write their responses on paper and pencil where applicable. A tape recorder was given to the leader of the experimental groups to record the group interactions. All students were

told to sit in groups of 5 and each student had to read a given online/printed text for the first ten minutes, after which they responded to 10 accompanying multiple-choice questions. This was considered as the Pre-test. A leader was then selected from each team, trained and given a set of questions and instructions to be carried out based on the four strategies outlined in RT. Students collectively discussed the responses to a number of strategies for at least five sessions. At the end of each session, students wrote their responses either in terms of predicting, asking and responding to questions, clarifying unclear concepts or writing a summary after they have participated in the discussion session which could be either online or face-to-face (e.g. forums, blogs, wall wisher). At the end of the workshop, students were required to respond to the same ten questions that were asked at the beginning of the first session. The responses to the final task were termed as the Post-test. The discussion could take place in the students' native language (in this case Malay or Chinese, where applicable). The rationale for allowing the students to use the mother tongue was based on Fung et al.'s (2003) suggestion that ESL or EFL learners should be allowed to use their native languages as this would facilitate interaction as well as contribute to the development of reading and comprehension skills in the target language especially when the final responses were written in the L2.

To assess development in learner's reading comprehension, the learners pre- and post-test results were compared and a paired t-test was run to determine whether there were significant differences between test results. In terms of relationship between the quality of responses and learning outcomes, the groups' performance for the various strategies used in RT were assessed to determine qualitative differences based on learner proficiency level. In terms of factors contributing to the quality of responses, the learners' responses were compared with their ability to respond accurately, appropriately and critically. To determine differences in accuracy and quality of responses, learners' responses to a selected reading task was analyzed. A trained ESL lecturer was requested to grade the quality of responses for all three groups.

RESULTS

Development in learner's performance due to exposure to online RT

There was a significant difference in the performance of the three groups as measured by the reading comprehension scores (Table 2). While the control group's (Group A= 2.4= 25%) initial score was lower than the experimental groups, Groups A and T did much better in the Post-test (67.3% and 70.7%) suggesting that learners' language ability was an important factor. Group C meanwhile did not perform as well but of notable importance at this point is that among the proficient learners, Group T performed much better than Group A suggesting online RT might have been a greater motivation for these learners.

Table 2: Difference in Learners' Reading Comprehension Scores According to Learner Ability

Paired Sample Statistics of Pre-Post Test scores

Group	N	Pre-test		Post-test		t-test	significance
		Mean	SD	Mean	SD		
A Control	15	2.40	1.183	6.73	1.335	-10.277	.000
C Experimental	15	2.67	1.047	6.00	1.648	-6.877	.000
T Experimental	15	3.20	.561	7.07	1.033	-11.502	.000
Total	45	2.76	1.004	6.60	1.405		

A=Control (Proficient) C= Online (Less Proficient) T=Online (Proficient)

Comparison between Strategies

To determine the helpful and problematic strategies for the less proficient learner, the analysis of mean average for the learners' performance for the various activities related to each strategy was used (Table 3). The results suggested that for the proficient learners, both prediction and questioning strategies were easier.

Table 3: Difference in Learners' Performance for each Strategy

Group	N	Summarizing	Clarifying	Questioning	Predicting
A Mean	15	5.37	5.50	6.23	9.00
SD		4.47	3.78	4.50	2.80
C Mean	15	2.40	4.50	6.43	7.80
SD		3.68	3.30	3.64	3.65
T Mean	15	6.33	7.13	7.80	9.67
SD		3.52	2.47	3.45	1.29
Total Mean	45	4.70	5.71	6.82	8.82
SD		4.18	3.34	3.86	2.81

However, with the less proficient learners, summarizing in particular was by far the most difficult strategy suggesting that these students may be having difficulty with higher order thinking skills since they were more troubled by the need to decipher meanings and short term goals. To determine the difference in problematic and helpful strategies for different learning groups, a repeated measure analysis of variance (ANOVA) was conducted for the various strategies and all groups. The results are as provided in Table 4. The performance for summarizing activities was statistically significant at $F(1,44) = 4.122$, $p < 0.05$ suggesting that summarizing was probably difficult for all.

Table 4: Analysis of Variance
ANOVA

			Sum of Squares	df	Mean Square	F	Sig.
Summarizing * Group	Between Groups	(Combined)	126.033	2	63.017	4.122	.023
	Within Groups		642.167	42	15.290		
	Total		768.200	44			
Clarifying * Group	Between Groups	(Combined)	53.011	2	26.506	2.543	.091
	Within Groups		437.733	42	10.422		
	Total		490.744	44			

Questioning * Group	Between Groups (Combined)	21.811	2	10.906	.721	.492
	Within Groups	635.267	42	15.125		
	Total	657.078	44			
Predicting * Group	Between Groups (Combined)	26.844	2	13.422	1.763	.184
	Within Groups	319.733	42	7.613		
	Total	346.578	44			

The learners' performance for the clarifying strategy was statistically significant at $F(2.44) = 2.543$, $p < 0.05$. Different types of strategies can present different learning problems to individual learners. A learner who is familiar with a particular strategy will find subsequent interaction with a particular approach easy. As such, almost all the proficient learners would have found questioning strategies to be relatively easy since questions and answers happen to be part and parcel of teaching and learning activities. However, the fact that the proficient experimental group (Group T) outperformed the control group (Group A) for all four strategies suggests that while proficient students might be able to ace through the various activities, the presence of the online environment appears to motivate learners much further.

The less proficient learners' progress rate

In describing what educators have learned about reading comprehension, Johnston and Kirby (2006) describe reading comprehension as the application of a skill that evolved for other purposes (listening or oral comprehension) to a new form of input (online text). Skilled readers are expected to extract more from a printed text than they would from oral speech and some of the information would come from more strategic, goal directed deliberate processing strategies. Table 5 and 6 provide evidence for a proficient and less proficient learners' employment of multiple strategies and their ability to respond spontaneously online. As an example, a proficient learners' usage of the four strategies in the archives were selected to illustrate how interaction took place due to the RT system. The subjects first read

a text on flashfloods in Malaysia (<http://www.timesofoman.com/news/Article-4782.aspx>). After predicting what would happen should the water level around them rise, students used a *chat room* to clarify unknown words and marked their corrections and confirmation of responses. For the strategy of questioning and clarification, students used *wall wisher* to annotate and discuss their responses.

Table 5: Proficient Learner's Prediction Record in the RT System (Group T)

S1	Prediction: What should you do when the water level around you rises?		
	Response	Strategies undertaken from the reading process.(This is in response to words in the text)	Confirmation or withdrawal of prediction
	One should turn off all electrical appliances, turn off the main power switch, keep important documents in a safe place and evacuate to a safe and high place.	<p>Clarification. Another word for the word '<i>seek</i>' is '<i>forage</i>'. But this might not be the correct meaning.. ☺</p> <p>Questioning: What is a single name for these objects- spoons, forks, knives?</p> <p>Annotation: What about dining? Incorrect. It is cutlery.</p>	<p>Correct. Evacuate to a location with a high altitude and take our precious belongings such as our birth certificate and house deed.</p> <p>One more: Sometimes we wait for authorities' instructions.</p>
	Summarization: Why do flash floods occur in Malaysia?		
	Malaysia gets plenty of rain all the time and floods may occur then the drainage systems are incapable of draining too much water or the earth itself is unable to absorb the large amount of water.	<p>What is the difference between flash floods and coastal floods?</p> <p>Annotation: Comes quickly and subsides quickly.</p> <p>Floods come slowly, subside slowly... maybe☺</p>	Incorrect: it is not absorb the water. The land gets "saturated".

	Questioning: What is a flashflood?		
	A flood that comes and goes quickly during a heavy rainfall.	Flash flood can happen anytime. It says in the passage that the water covered is small but concentrated in a small area and can rise.	Incorrect: Flashflood is a natural disaster that commonly occurs during the monsoon season.

In terms of reading, it was evident from the responses of the proficient learner that the student was able to interact in the online environment. The student was able to retrieve, locate the meaning of the word ‘seek’ as in ‘seek shelter’ correctly simply by going to an online dictionary and replacing it with ‘forage’. The student was also able to scroll the text easily to retrieve the actual context and modify the response through self-correction which demonstrates that the learner was able to think as he read the text. The availability of a paper and pencil alongside the reader made it easy for the student to add his/her own notes and annotate the text with personal observations which was valuable during the sharing session when the learners spoke about their learning experience. This was a marked contrast when compared to the responses of the less proficient learners (Table 6) whose responses were confined to a select number of words and students were focused on getting their responses right without stopping to think or annotate their opinions and experiences. Where students had difficulty, they were quick to scroll to the actual passage and immediately lift select phrases and replace them as responses. Minimal changes were made to the actual responses suggesting that student were picking up new skills, where in addition to scanning, they could focus on text and understanding was restricted to the words on the screen rather than the whole reading experience. Most of the less proficient students were more concerned over completing the given task and did not stop to interact or share the information though the *chat box* that was available for them throughout the session.

Table 6: Less Proficient Learner's Prediction Record in the RT System. (Group T)

Task	Prediction: What should you do when the water level around you rises?		
	Response	Strategies undertaken from the reading process.	Confirmation or withdrawal of prediction.
	Go to the roof of the house.	Clarification. Another word for the word 'seek' is unhealthy. Questioning: What is a single name for these objects- spoons, forks, knives? Annotation: spoons	Incorrect: Not unhealthy. This word has two 'ee'. Many people can get sick when there is rain. Seek is not in the text.
	Clarification: Why do flash floods occur in Malaysia?		
	Because people don't keep the river clean and throw rubbish every way.	What is the difference between flash floods and coastal floods? Annotation: A flood that occur suddenly.	Incorrect: not suddenly. Flood that happen in sudden.
	Questioning: What is a flashflood?		
	Flashflood is a situation where a town becomes flooded streets. It is in the text.	The flash floods occur in Malaysia because of it 'iklim'.	Correct::'iklim' is climate. Got climate change.

In addition to the reading process recorded in the system to track learning difficulties and improvements, the students were also requested to discuss and share their understanding of the passage through group interaction at the end of the session. The students taped recorded group interaction is as shown in Table 7. Some students were quick to use words and ideas from the text.

Table 7: Interaction between Learners in the Less Proficient Group.

Leader /Teacher: How does a flashflood differ from a flood?	
1. Flashflood happened in a small area.	First level comprehension of learners
1.1 A flashflood occurs very quickly and without notice.	
1.1.1 No actually the flood occurs when drains are blocked or moved.	
Leader’s Intervention	
Actually it says here that flashflood is a natural disaster which occurs when the surrounding water level increases because the drainage system is clogged.	
1.1 No, it says flashflood is a natural disaster that occurs because of heavy rainfall or dam failure.	Peer’s suggestion
1.1 Yah, but we don’t all live near dams	
1. In my opinion Malaysia often has dam failure and heavy rainfalls brought by Monsoon makes it worse.	Final interpretation

Table 8: Interaction between Learners in the Less Proficient Group.

Leader /Teacher: How does a flashflood differ from a flood?	
2. Flashflood happens in towns and causes traffic jams.	First level comprehension of learners
1.1 Floods occur when there is heavy rain for many days.	
1.1.1 I was caught in a flood once when I went to West Malaysia.	
Leader’s Intervention	

Really. What did you do? Sorry, flashflood occurs when there is a lot of construction and the drains get blocked.	
1.1 Actually, floods are natural disaster because people suffer but with flashfloods motorist suffer.	Peer's suggestion
1.1 I know in Wimpy kid was caught in a flashflood. Did you go to a shelter?	
1.1.1 No, it was only for an hour.	
1 Then it was a flashflood	Final interpretation

It was evident from the interactions that the non-linear activity helped the students think about the text in detail and also categorize information. This activity also helped the students build from one another's experience and helped them summarize and clarify vague areas.

Discussion

From the findings, some issues can be explored. First, Spörer, Brunstein and Kieschke (2009) investigated the effectiveness of a single strategy or combination of different strategies in face-to-face instruction of RT, and found that individual learner's reading comprehension is enhanced by remedial instruction that incorporate multiple strategies in the reading classroom. Similarly with this study, all students learned to comprehend better following the interaction regardless of whether it was online or otherwise and this is part and parcel of learning. All teachers know that learning will take place with or without intervention in the long run. However, in this study it was evident that learners of similar proficiency level were able to reinforce their understanding much more through the Online RT platform, compared to the traditional RT platform. Then it all boils down to active learning and creating a community of online learners around in preparation for the classroom of tomorrow. There is a culture of participation and helping one another make meaning out of what they had learned. So, it comes down to basic

beliefs. Some teachers may be convinced that silent reading and face-to-face environment works well for the reading classroom. However, an insight into the culture of participation, learner engagement and the leveraging of knowledge between those who have and those who do not, is testimony to the power of the online learning environment. In this matter, though some of these students did not have much vocabulary and relied on coping strategies to help them respond accurately in real time, an intervention program such as the online RT program actually showed that the reticent and marginalized speakers can contribute just as much to the learning and reading process as their proficient peers. However, so long as students are restricted to specific online pages where they fill in responses governed by the need to provide right and wrong answers without being allowed to express their understanding and experiences, teachers will never realize the excitement, the discovery and learning taking place in the online classroom and success can never be measured. Though research in reciprocal teaching and struggling learner needs may not be new, relatively few researchers have examined the relationship between less proficient learner and proficient learners ability to construct meaning from an online text, and for Malaysia, the development of the Smart School learners remain crucial since they tend to be the key players in defining the methodology and approach for online language learning. Without a clear understanding of this relationship, practitioners and researchers may continue to advocate for specific use of technology that are unable to facilitate or support due to these underlying fundamental beliefs.

From this study, it is evident that while both proficient and less proficient learners benefit from RT regardless of whether it is face-to-face or online, it is evident that online RT provides greater accountability for the learning that is taking place. The insights into the interactions show the development of the online reader and the creativity and learning taking place. In the words of Pandian (2002), “the implementation of the Smart Schools Project is already a step ahead in the direction of preparing young Malaysians for the coming of a new age” and in terms of methodology “the Smart Schools ELT program is supposed to play a crucial role in developing manpower” but

ultimately, the decision regarding whether to use RT with or without the online platform will rest on the shoulders of language teachers regardless of where they belong.

For avid traditionalists, it can be argued that reading online (e.g. kindle) will never be able to replace cuddling up with a good book on a rainy day, but from an educational standard point it cannot be disputed that the benefits of online reading and the use of electronic documents are simply numerous and here to stay and to reiterate Pandian's observations "the key players in the classroom of tomorrow will be those who have the capability to use Information Communication Technology to create new industries of the future" (Pandian 2002, 51). In sum, for nations like Malaysia bent on promoting independent and life-long readers and for teachers who want to make fundamental changes in the way they teach languages, as well as policy makers who aim to improve literacy rates for every learner, there is a need to examine teachers' beliefs and get them to think about the way they teach reading, language and technology. The full integration of computers into the education system for many countries is an elusive goal and unless there is reconciliation between teachers and what makes them want to use computers, it would be difficult to convince all teaching communities that online teaching and RT are here to stay. As Cuban (1997) mentioned, "it's not about the problem of resources, but a struggle over core values." One needs to believe in order to see success.

REFERENCES

- Armbruster, B. B., Anderson, T. H., & Ostertag, J. 1987. "Does text structure/summarization instruction facilitate learning from expository text?" *Reading Research Quarterly*, 22.3: 331-346.
- Baharun, Norhayati & A. Porter. 2012. "A learning design to support student learning of statistics within an online learning environment." Paper presented at *1st International Statistical Conference* 4-6 September 2012. Conference proceeding, 359-367. Johor Bahru, Malaysia: Department of Mathematical Sciences, Universiti Teknologi Malaysia (UTM).
- Becker, H.J., & M.M. Riel. 1999. *Teacher professionalism, school work culture and the emergence of constructivist-compatible pedagogies* [PDF file]. Center for Research on Information Technology and Organizations. Accessed October 2, 2002. <http://www.crito.uci.edu/tlc>.
- Chen, C. M., T.Y. You, F.Y. Yang & C.C. Huang. 2004. *An evaluation of English proficiency tests for college students in Taiwan*. Taiwan: Ministry of Education.
- Cuban, L. 1997, May 21. "High-tech schools and low-tech teaching." In *Education Week on the Web*. Accessed February 10, 2004. <http://www.edweek.org/ew/vol-16/34cuban.h16>.
- Dole, J. A., S.W. Valencia, E.A. Greer & J.L. Wardrop. 1991. "Effects of two types of prereading instruction on the comprehension of narrative and expository text." *Reading Research Quarterly*, 26.2: 142-159.
- Dreyer, C. 1998. "Improving students' reading comprehension by means of strategy instruction." *Journal for Language Teaching*, 31(1): 18-29.

- Dreyer, C. & C. Nel. 2003. "Teaching reading strategies and reading comprehension within a technology-enhanced learning environment." *System*, 31(3): 349-365.
- Ertmer, P. A. 2005. "Teacher pedagogical beliefs: The final frontier in our quest for technology integration?" *Educational Technology Research & Development*, 53(4): 25-39.
- Fung, I. Y., I. A. Wilkinson & D. W. Moore. 2003. "L1-assisted reciprocal teaching to improve ESL students' comprehension of English expository text." *Learning and Instruction*, 13(1): 1-31.
- Inderjit, S. 2014. "Reading trends and improving reading skills among students in Malaysia." *International Journal of Research in Social Science*, 3(5): 70-81.
- Johnston, T. C. & J.R. Kirby. 2006. "The contribution of naming speed to the simple view of reading." *Reading and Writing*, 19: 339-361.
- Laufer, Batia. 1997. "The lexical plight in second language reading: Words you don't know, words you think you know, and words you can't guess." In *Second Language Vocabulary Acquisition: a Rationale for Pedagogy*, edited by J. Coady and T. Huckin, 20-34. Cambridge: Cambridge University Press.
- MOE. 2014. *Malaysian Education Blueprint (2013-2025)*. [online] Accessed Nov. 11, 2014. http://planipolis.iiep.unesco.org/upload/Malaysia/Malaysia_Blueprint.pdf.
- Norhayati, A. M. 2000. "Computer Technology in Malaysia: Teachers' Background Characteristics, Attitudes and Concerns." *The Electronic Journal on Information Systems in Developing Countries*, 3(8): 1-13. Accessed June 14, 2014. <http://www.ejisd.org/ojs2/index.php/ejisd/viewFile/20/20>.
- Palinscar, A. S., & A.L. Brown. 1984. "Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities." *Cognition and Instruction*, 1(2): 117-175.

- Pandian. 2002. "English language teaching in Malaysia today." *Asia Pacific Journal of Education*, 22.2: 35-52.
- Pillay, H. 1998. "Issues in the teaching of English in Malaysia." Accessed June 14, 2014. <http://langue.hyper.chubu.ac.jp/jalt/pub/tlt/98/nov/pillai.html>
- Png, L.H. 2010. "Teacher's views of reciprocal teaching as a tool for teaching reading comprehension." *The English Teacher*, 39: 179-193.
- Rosenshine, B., C. Meister & S. Chapman. 1996. "Teaching students to generate questions: A review of the intervention studies." *Review of Educational Research*, 66(2): 181-221.
- Soto, L.D. 1989. "Enhancing the written medium of culturally diverse learners via reciprocal interaction." *The Urban Review*, 21(3): 145-149.
- Spörer, N., J.C. Brunstein & U.L.F. Kieschke. 2009. "Improving students' reading comprehension skills: Effects of strategy instruction and reciprocal teaching." *Learning and Instruction*, 19(3): 272-286.
- U. S. Department of Education. 2003. Federal funding for educational technology and how it is used in the classroom: A summary of findings from the Integrated Studies of Educational Technology. Accessed June 14, 2014. <http://www.ed.gov/about/offices/list/os/technology/evaluation.html>.
- Vygotsky, L. 1978. "Interaction between learning and development." *From: Mind and Society*, pp. 79-91. Cambridge, MA: Harvard University Press.
- World Education Report. 1993. Paris: Unesco. Print. Eric Number ED366051

- Wood, E., M. Motz & T. Willoughby. 1998. "Examining students' retrospective memories of strategy development." *Journal of Educational Psychology*, 90(4): 698-704.
<http://dx.doi.org/10.1037/0022-0663.90.4.698>
- Yang, Y. F. 2010. "Developing a reciprocal teaching/learning system for college remedial reading instruction." *Computers & Education*, 55(3): 1193-1201.
- Yu, A. T., S.W. Tian, D. Vogel and C.W.K. Ron. 2010. "Can learning be virtually boosted? An investigation of online social networking impacts." *Computers and Education*, 55 (4): 1494-1503.

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