

## Enhancing the learning of vocabulary of Primary 3 students through the use of the game, *Taboo*<sup>1</sup>.

Eadelin Marzinek  
Rehana Shaik  
Wendy Lim

Elias Park Primary School  
Singapore

### Abstract

*In this study, we examined the effectiveness of using Taboo, a word guessing collaborative game, to improve students' ability to use appropriate words in context in a Primary 3 classroom. Taboo, a commercially available game, was chosen for its vast vocabulary word bank and game features – competitive and communicative. From the interviews with the students, games continue to serve as a motivational tool for them to improve their acquisition of language skills, and, in this case, learning and using new vocabulary. The study aimed to find out the characteristics of the game that motivate students and the gaps that we needed to identify in order to adapt and recreate the game to meet the students' learning needs.*

### Introduction

In an effort to raise English standards in Singapore and make learning the language interactive and fun, the Strategies for English Language Learning and Reading (STELLAR) programme was introduced by the Ministry of Education (MOE) in 2006. According to Dr Elizabeth Pang, the Programme Director for Literacy Development at MOE (Ministry of Education, 2010), STELLAR aims to engage learners so that they look forward to class every day. In the STELLAR pedagogical framework, students learn targeted vocabulary as a language item through explicit teaching. However, vocabulary learning in school has been limited to the theme of selected storybooks. Students rely on teachers for new words and meanings as they learn vocabulary passively with little motivation and understanding. The action research team at Elias Park Primary School thus decided to integrate the game *Taboo* into STELLAR to enhance the learning of vocabulary.

We believe that language acquisition involves social interaction where people get to communicate and exchange ideas with each other. Dalton (2006) stated that games encourage social skills, support motivation, and can be customised to suit the learning needs of students. Games also provide people with opportunities to practise and explore a target language through communication. Allen (1999) states that definitions alone do not provide enough support for readers to use and apply the vocabulary learnt. Instead, words should be used repeatedly, between ten and fifteen times, in order to help students remember the meaning of the words. However, she highlighted that strategies such as drill and practice may take away the joy of learning, and thus repetition should be carried out in a meaningful context. Games can provide students the experience of learning and practising vocabulary with their peers. She also added that

---

<sup>1</sup> *Taboo* is a card game where a player gives clues to have their partners guess the word on the player's card without using the word itself and five additional words listed on the card.

opportunities should be given to students to tap on their background knowledge to develop a deeper understanding of words and concepts. This is supported by Squire & Kandel (2000) who suggest that retention of information takes place through repetition. Hirumi (2010) proposed three advantages of playing games:

- a) Increased Motivation: Students who are engaged and have fun tend to find the learning experience more meaningful.
- b) Reflective Learning: Students feel safe to experiment and make mistakes in a game, encouraging them to reflect upon the outcomes of the decisions they make.
- c) Feedback and Self-Regulation: Students reflect and refine their strategies as they receive immediate feedback.

## Methodology

### Sample

All the Primary 3 students had been streamed according to their levels of proficiency based on their Primary 2 (P2) entry marks. Within each class, students were placed into groups of four by their EL teachers based on their EL proficiency levels and their P2 English results. We believed that by putting students together with peers of similar levels, they would feel more comfortable and enjoy the game better.

Table 1

#### Profile of the classes

Class	Number of students	Proficiency	Teacher
3 C (Class 1)	40	High	Teacher 1
3 D (Class 2)	39	High to Middle	Teacher 2
3 H (Class 3)	40	Middle	Teacher 3
3 K (Class 4)	35	Middle to Low	Teacher 2
3 L (Class 5)	18	Low	Teachers 4 and 5

### Preparing the Teachers

Teachers were briefed on the games approach during level meetings to establish a common understanding about the research project goals and expectations. The distribution of resources, and the delivery of instructions on the main steps of the game and its intended learning goals and objectives, the grouping of students, and the duration of play were done during level meetings.

### Implementing the Game

Teachers then carried out the game in every STELLAR unit. In the first cycle in Term 2, two periods (1 hour) were allocated each week over a period of three weeks (six periods) for students to play *Taboo* as a game approach to learning vocabulary for the STELLAR unit taught. In the second cycle in Term 3, students completed a similar structure of six periods over three weeks (two periods per week) to play *Taboo* as a game approach to learning vocabulary for the STELLAR unit taught in Term 3.

### Conducting Vocabulary Cloze Pre- and Post-Tests

A vocabulary pre-test was conducted at the beginning of Term 2, 2016 (Term 2, Week 2) to ascertain the students' level at the start of the study. Two vocabulary post-tests were conducted. The first

post-test was administered in Term 2, Week 9, and the second post-test was administered in Term 3, Week 9 (to look at long-term retention).

## Data Collection

To monitor our students' ability to use words in context, we conducted cloze passage pre- and post-tests with each test comprising a vocabulary cloze with 10 blanks for students to fill in.

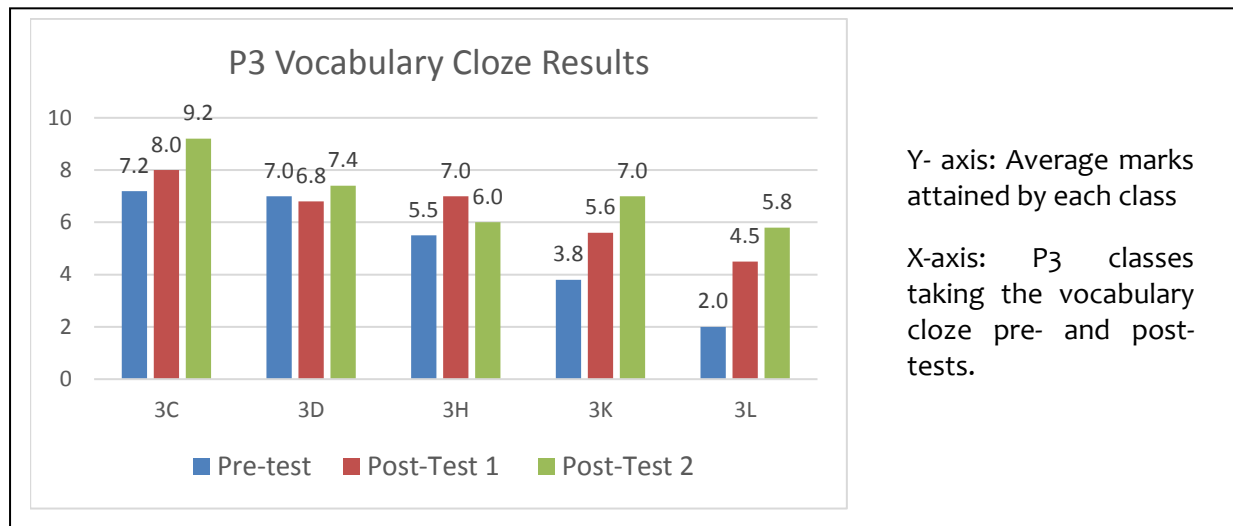


Figure 1. The mean marks attained by each class in each test.

### Conducting Paired t-tests

Our null hypothesis was: The word guessing collaborative game, *Taboo*, did not help students to improve their ability to use appropriate words in context in a Primary 3 classroom.

Our alternative hypothesis was: The word guessing collaborative game, *Taboo*, helped students to improve their ability to use appropriate words in context in a Primary 3 classroom.

We then conducted paired t-tests to check if the difference between each pair of test results in each class was significant. The paired t-test results are shown in the table below. Table 2 shows the p values (to three significant places) from paired t-tests conducted between three pairs of tests for each class.

Table 2

Results for the t-tests (one-tail) comparing each pair of tests for each class and the whole level. (Significant results are shown in black text.)

	Pre-test and Post-test 1	Pre-test and Post-test 2	Post-test 1 and Post-test 2
<b>3C</b>	t(34) = 2.93, p = .003	t(34) = 7.44, p < .001	t(34) = 4.61, p < .001
<b>3D</b>	t(35) = .85, p = .20	t(35) = 1.64, p = .06	t(35) = 2.07, p = .02
<b>3H</b>	t(36) = 4.55, p < .001	t(36) = 1.11, p = .14	t(37) = 2.28, p = .01
<b>3K</b>	t(29) = 3.99, p < .001	t(29) = 6.75, p < .001	t(29) = 2.69, p = .006
<b>3L</b>	t(19) = 4.46, p < .001	t(19) = 8.68, p < .001	t(19) = 3.05, p = .003
<b>P3</b>	t(155) = -6.29, p < .001	t(155) = 8.48, p < .001	t(155) = 2.95, p = .002

## Results

### *P3 Level Progress*

We also compared the samples as a level (156 students altogether), to have more reliable results and the results in the last line of Table 2 show that the differences between the pre-test and post-test 1, the pre-test and post-test 2, and post-test 1 and post-test 2 are significant.

### *Class Progress*

For Class 3C, the mean marks attained in post-test 1 (8.0) and post-test 2 (9.2) were both higher than the pre-test (7.2). Teacher 1 explained that students from 3C were fast learners and well-disciplined, supporting the consistent improvement shown in post-test 1 and post-test 2. Teacher 1 also added that these students are competitive and gave their best to win in every round of the game. Based on the paired *t*-test in the table above, the most significant difference can be observed between the pre-test and post-test 2, followed by the difference between post-test 1 and post-test 2. By the term when post-test 2 was carried out, students were so familiar with the game rules and procedures that they needed minimal adult supervision. There were fewer interventions from the teacher, thus allowing the students to proceed playing the game for more rounds in each vocabulary period.

For Class 3D, while the mean mark attained in post-test 1 (6.8) was slightly lower than in the pre-test (7.0), students made an improvement in post-test 2 (7.4), higher than the average marks attained in both the pre-test and post-test 1. Teacher 2 believed that the class was still mastering the game rules when post-test 1 was carried out. Therefore they were only able to show improvement in post-test 2 as they became familiar with the game. This coincides with the paired *t*-test results in the table above as only the difference between the pre-test and post-test 2 is significant. Like 3C, there were fewer interventions from the teacher, thus allowing the students to proceed playing the game for more rounds in each vocabulary period.

The mean marks attained by 3H in post-test 1 (7.0) and post-test 2 (6.0) were higher than in the pre-test (5.5). However, we noted that the mark attained in post-test 2 was lower than in post-test 1. Looking at the paired *t*-test results, the differences between the pre-test and post-test 1, and the pre-test and post-test 2 are not significant. It seems that the class may not have understood the game as a learning tool.

For Class 3K, the mean marks attained in post-test 1 (5.6) and post-test 2 (7.0) were both higher than that in the pre-test (3.8). The paired *t*-test results followed the pattern that we had hoped to see where students showed significant improvement. Each subsequent test shows the students as a whole to be improving significantly. At the beginning of the first cycle, students were generally shy but well-disciplined, allowing Teacher 2 to implement the game more effectively. Teacher 2 added that encouragement was needed to get a number of students involved in the game. During the second cycle, students became more engaged in the game.

For Class 3L, the average marks attained in post-test 1 and post-test 2 were higher than in the pre-test. The paired *t*-test results followed the pattern that we would hope to see. Each subsequent test shows the students as a whole to be significantly improving. We believe that, because the class size was much smaller than that of other classes, this allowed Teacher 4 and Teacher 5 to facilitate the game more effectively.

### *Cloze Assessment*

Based on the pre-test analysis, the average marks of 3C, 3D, 3H were above the passing mark (i.e.

the standard 50% of the total, or five marks out of 10 in this case) while the average marks of 3K and 3L were below the passing mark. The distribution of marks matches the respective class proficiency levels, given that these classes had been banded based on their Primary 2 entry marks.

Based on the first post-test, all classes, except 3D, did better than in the pre-test. We then looked into the questions in post-test 1 that students had answered incorrectly. The first common error that we observed was that students were confused with the meaning of these two words, (gr)um(bled) and (r)um(bled). This example showed that students were able to recall the inflections but failed to distinguish the initial consonants.

### *Interviews with the Students*

After conducting the cloze assessments (the pre-test, post-test 1 and post-test 2), Teacher 2 then interviewed two or three students from each class who showed consistent improvement in post-test 1 and post-test 2. Teacher 2 also interviewed students whose marks did not improve in both post-test 1 and post-test 2 so as to find out how they felt and what they thought about the game.

The questions were as follows:

1. Name one activity that you like the most during EL lessons. Why do you like this activity?
2. Does a game like *Taboo* help improve your English, for example, your spelling, knowing more words, forming sentences, writing?
3. Were there any challenges you faced during the game?
4. What do you think you can do to be better at the game?
5. Do you know any other game(s) similar to *Taboo*?

Sample students' responses were as follows:

1. *I enjoyed the game as I could talk to my friends. I also asked my parents to buy a set of Taboo for us to play at home. I was not very familiar with the game when we first started playing it. It was very challenging as I was not allowed to use any of the taboo words. When I came across with words which I did not know, I would ask my teacher or my parents. In order to be better at the game, I can try to remember words that I do not know and find out more from my teacher or parents. We played a similar game during Chinese lessons too. Teacher would flash some cards and we had to quickly name the items.*
2. *I like to play this game as I get to be in the same team with some of my friends. This game has helped me to know more words. The game was difficult but I became better at playing it, scoring more points. I think I have to continue playing Taboo in order to be good at it. I can also skip to words that I know and not spend too much time on words that I know. I do not remember playing any similar games in other subjects.*
3. *Taboo is fun. I look forward to playing Taboo during English lessons. When I do not know the meaning of a word, I will ask my parents or teachers. We played less rounds in Term 3 than in Term 2. I still find the game challenging. I do not remember playing any similar games in other subjects.*
4. *I like Taboo as I get to play the game with my friends. There were times my friends were not able to guess the words and I got mad at them for a while. However, we became better at the game as we played it more often. We do not get to play games in other subjects.*
5. *I like Taboo because I get to talk. It is a difficult game and I took quite some time to be familiar with the game. When I came across with words which I did not know, I would ask my teacher or my parents. We do not get to play games in other subjects.*

All students highlighted that the game made learning vocabulary more fun. However, they were not able to give examples of how the game had exactly motivated them to learn more words actively and independently. When students play the same or a similar vocabulary game at home, they still ask their parents if they do not know the meaning of the words. This tells us that students see adults as the preferred source to help them understand the meaning of words.

### *Teachers' Observations*

Some students were too shy to participate in the game but became increasingly confident when they started to play more rounds with their peers. Conflicts were observed and these sometimes required teachers to step in to mediate. However, students were very quick to learn how to mediate and play fair when the same problems arose again.

Many students skipped to words that they knew in order to win the game in the given time. Therefore, the motivation to learn new words was not observed among the students. Teachers also added that students used mime, on top of verbal cues, to help their peers guess the word. Finally, students did not seem to apply words that they had learnt in their writing, and thus, the words learnt may not be useful for application in other language tasks.

## **Limitations and Recommendations**

### *1. Reviewing Game Rules and Instructions*

We need to relook into the game rules as many students were not able to prompt their teammates fluently into using their own words at the beginning of cycle 1. Teachers could start the first vocabulary game with the flexibility to use up to three of the taboo words. As students become more familiar with the game rules, teachers could pose a more challenging task with stricter rules with the use of taboo words not allowed, a shorter duration to each round, and perhaps a deduction of points if a player explains in a different language.

### *2. Setting Up a Points System*

We also reviewed the resources again and believe that appropriate points should be written on each card to reflect the level of difficulty, and to motivate students to pick up new and more challenging words in order to win. For instance, one point could be awarded for correctly guessed words such as 'fruit' (one syllable) while three points could be awarded for correctly guessed words like 'pharmacy' (three syllables). Bonus points could be added when students are able to spell the words.

### *3. Developing a Vocabulary Bank*

Based on the teachers' feedback, words in the game should be useful for students to use in their writing. As such, we should:

- a) Tap on teachers' teaching experience to include a list of useful academic words that are used more frequently in writing than in oral language in order to help students express ideas more accurately in their writing (Beck, McKeown, & Kucan, 2002).
- b) Include words from school selected titles, encouraging the students to read more and widely.
- c) Encourage the students to suggest their own words, making the game more engaging for the children.



#### 4. Teaching Strategies: K-W-L Approach

Teachers may also consider using K-W-L as part of the group learning game. Before each game, students could browse through the game cards, and write down some of the words that they know and have been using in their writing or speaking. At the end of each game, students could be invited to write down words that they wish to know. They could then be encouraged to look up the meaning of the words in a dictionary, analyse word parts, form a sentence and share it with their friends before or/and while playing the game (Graves, 2006).

Teachers also need to plan specific activities to help students distinguish and revise words that end with similar inflections. Strategies such as onset-rime blending or resources like video clips may help to raise students' phonological awareness as they try to spell words with similar inflections accurately (Tompkins, 2010).

### Conclusions and Recommendations

After presenting the findings, it is evident that using games may promote student's motivation and increase enjoyment in learning vocabulary. As proposed by Hirumi (2010), we observed the following:

- a) Increased Motivation: The interview with the students showed us that they now have greater interest in the language. While some students enjoyed learning through group learning, the game also helped others who were less confident to speak the language. Motivation to win was evident in all classes, but we hope to gather more information on the relationship between motivation to win and motivation to learn in our next study.
- b) Reflective Learning: Students felt safe to make mistakes as they explored ways to win a game. However, pre- and post-game activities such as self-assessment and the setting of targets should be encouraged to help students reflect and improve their game performances or decisions.
- c) Feedback and Self-Regulation: Although students received immediate feedback while playing, a follow-up activity, such the use of the K-W-L chart, is required to help them organise their thoughts.

In order to use the game to deliver the intended objectives, teachers need to first come together and decide the list of useful and age-appropriate words for students to learn. After that, it will be necessary to develop rules and a point system that will help motivate students learn these words. Finally, it is important to conduct a follow-up activity after the game to help students remember the meaning of the words learnt.

### Note

This game approach was shared at the following events:

- NIE Redesigning Pedagogy International Conference 2017 – Workshop 270 at the National Institute of Education on 2 June 2017
- Learning Festival at Elias Park Primary School on 3 August 2017
- Cluster Sharing at Coral Primary School on 25 July 2017

Participants agreed that such games add joy to learning and provide a safe positive learning environment for students to make mistakes. However, some participants highlighted that the learning experiences might not be meaningful as there were no real world contexts observed in the game unlike in games like Monopoly where students were able to apply the concept of counting dollars in a real world context – buying properties, selling mortgages, and paying

electricity bills. As such, it is worth noting that not all games provide learning experiences with real world contexts.

## References

- Allen, J. (1999). *Words, Words, Words: Teaching Vocabulary in Grades 4-12*. Portland, OR: Sternhouse.
- Beck, I., McKeown, M., & Kucan, L. (2002) *Choosing Words to Teach*. Retrieved from <http://www.readingrockets.org/article/choosing-words-teach>
- Dalton, E. (2006). Language Learning Games: Why, When, and How. *ISAGA at a watershed*, 20(2) 305-326.
- Graves, M. F. (2006). *The Vocabulary Book: Learning and Instruction*. New York, NY: Guilford Press.
- Hirumi, A. (Ed.). (2010). *Playing Games in Schools: Video Games and Simulations for Primary and Secondary Education*. Washington, DC: International Society for Technology in Education.
- Ministry of Education. (2010). *The STELLAR Way to English Language Learning*. Retrieved from <https://www.schoolbag.sg/story/the-stellar-way-to-english-language-learning>
- Squire, L. R. & Kandel, E. R. (2000). *Memory: From Mind to Molecules*. New York, NY: Scientific American Library.
- Tompkins, G. E. (2010). *Literacy for the 21st Century: A Balanced Approach*. Boston, MA: Allyn & Bacon.



## Annex A

### Vocabulary Cloze Pre-test

One afternoon, Fiona and her brother, Royston, were watching their favourite television (1) \_\_\_\_\_ on Channel 5. Suddenly, the television was turned off and they were (2) \_\_\_\_\_ at a dark television screen. They also (3) \_\_\_\_\_ that the fan had stopped (4) \_\_\_\_\_ and they were feeling warm.

Fiona and Royston were (5) \_\_\_\_\_ as to why this was happening. They (6) \_\_\_\_\_ for a while to see if everything would go back to (7) \_\_\_\_\_. After about five minutes, the (8) \_\_\_\_\_ came on and the fan started working again. The show that the (9) \_\_\_\_\_ had been watching came on again. The children had stayed (10) \_\_\_\_\_ during the blackout and did not panic.

Ans:

- 1) programme/show
- 2) staring
- 3) realised
- 4) working/functioning
- 5) clueless
- 6) waited
- 7) normal
- 8) lights
- 9) siblings/children
- 10) calm

### Vocabulary Cloze Post-test 1

In the animal city, there lived a monstrous glutton called Gruffalo. He loved ice-cream so much that he could 1) \_\_\_\_\_ three barrels of it a day! Soon, his bad eating habit caused him to develop red 2) \_\_\_\_\_ on his scaly skin and he could not stop 3) \_\_\_\_\_ with cold. He wore a thick 4) \_\_\_\_\_ to keep himself warm and 5) \_\_\_\_\_ in bed days and nights. However, his high temperature persisted and he did not 6) \_\_\_\_\_ from his illness.

His friend, Dinosaur, came to his house to 7) \_\_\_\_\_ him. To her horror, she found Gruffalo lying motionlessly on the floor. She quickly dialled 995 for an 8) \_\_\_\_\_. Within the next fifteen minutes, wails of sirens could be heard over the city.

“Are you alright!” asked the 9) \_\_\_\_\_ in her smart medical uniform.

Gruffalo gradually opened his eyes and stretched his arms. “Yawn... I had a long nap and now I am feeling hungry!” said Gruffalo.

His stomach 10) \_\_\_\_\_ and he went back to eating again.

Ans:

- 1) eat/have
- 2) rashes
- 3) trembling/shivering
- 4) jacket/sweater/cardigan/pull over
- 5) rested
- 6) recover
- 7) visit
- 8) ambulance
- 9) paramedic
- 10) rumbled

### Vocabulary Cloze Post-test 2

People love the use of plastic bottles. However, many ignore the undesirable impacts that they have on the 1) \_\_\_\_\_. For every six water bottles we use, only one makes it to the 2) \_\_\_\_\_ bin for future use. The rest are sent to landfills, or end up as 3) \_\_\_\_\_ on land and in water. Many times, marine animals such as seals and turtles are often killed for 4) \_\_\_\_\_ the plastic parts.

To meet the demand, manufacturers use seventeen million big 5) \_\_\_\_\_ of crude oil to 6) \_\_\_\_\_ these bottles. That's enough oil to keep a million cars going for a year. Plastic takes many hundreds of years to break down and therefore we need to 7) \_\_\_\_\_ the use of plastic. For instance, we can replace plastic with glass.

Water is good for you, so keep 8) \_\_\_\_\_ it. Just remember this, recycling one plastic bottle can help 9) \_\_\_\_\_ enough energy to power a 60-watt light bulb for six hours. With a concerted effort, we can protect the Earth, our 10) \_\_\_\_\_.

Ans:

- 1) environment
- 2) recycling
- 3) trash/waste/rubbish
- 4) eating/swallowing
- 5) barrels
- 6) make/produce
- 7) reduce
- 8) drinking
- 9) save
- 10) planet