Investigating low proficiency ESL students' perception of the use of i-Think Maps in writing practices

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Abstract

Limited vocabulary in the English language and grammatical inaccuracy pose great challenges in writing for the low proficient ESL students. However, the use of i-Think Maps can be utilised to guide the students to "think" of the contents before writing their essays. This qualitative paper is part of a study on i-Think map use in Malaysian ESL classrooms. The focus group interview provides the perception on the use of four types of i-Think Maps in the low proficiency ESL students written tasks. The findings suggest that the students experience a reduced apprehension towards writing; participate more actively in their writing tasks; improve their logical flow of ideas and made attempts to complete their writing tasks. This study suggests that i-Think Maps, if used effectively in classroom practices can yield interest among the low proficiency students who have apprehension in ESL writing tasks. This study has pedagogical implication in facilitating students' writing via the use of i-Think Maps. As the students have the background knowledge of i-Think map use across their curriculum, it is recommended that the teachers optimise the guided use of i-Think map in the ESL classrooms.

Keywords
i-Think Maps, ESL, writing, strategies, low proficiency

Introduction

Writing is a complex task (Bereiter & Scardamalia, 1987; Flower & Hayes, 1981) and it is a knowledge of converting processes. We communicate ideas through writing. As such, it involves cognitive processes in arranging a large body of information into a structured discussion to transfer knowledge (Chow, 2007). Critical thinking means taking control of one's conscious thought processes. Thinking may come naturally, but the awareness of how one thinks does not occur spontaneously. As such, "thinking about thinking" is the key to critical thinking. By thinking critically, students will be able to think and write. These cognitive processes or thinking skills should be a part of the teaching of writing so that the students are able to communicate their ideas effectively.

Writing communicates a person's own thoughts. It allows a person to voice out his opinions and communicate thoughts and emotions (Alexander, 2008; Balci, 2013; Suleiman, 2000). Hence, students need to acquire thinking skills in order to communicate their thoughts. Students who have not learned to think critically often

experience a hard time developing their ideas in writing. However, writing as a skill is still neglected to a certain extent in the local context. Studies show that successful writing performance in the language classroom needs L2 learners to be highly proficient in English (Mohd Zin & Rafiq-Galea, 2010). However, the L2 learners, particularly from rural areas are further challenged in writing activity in their English Language classrooms. This explains why L2 students of low proficiency level often use less of writing strategies (Chien, 2010). Students need to manage their anxiety towards writing to improve their readiness towards writing (Rahim et al., 2016). Another study by Ridhuan and Abdullah's (2009) also showed that lower level students spend less time planning as opposed to proficient students who spend a lot of time planning the contents and drafting out their essays on how they want the presentation to be. Thus, the low proficiency ESL students need to be guided to enhance their writing skills. In order to fulfill the need to teach writing skills to the students for better understanding and learning, the teachers can adopt a variety of strategies to teach writing (Chow, 2007; Graham, 2007; Kong, 2005). Planning which is often done mentally without being written down is ineffective in developing content to complete the task (Indra, 2001). Thus, teachers must find new and interesting ways to capture students' attention in the language classroom, especially in the writing class.

In Malaysia, the Ministry of Education, introduced i-Think Maps to reinforce students' ability to think by using visual thinking tools. i-Think Maps was introduced nationwide in the year 2012 to help students become better learners. The use of i-Think Maps for the low proficiency students were however under-explored, mainly in the context of English language learning in Malaysia. Like-wise, the utilisation of i-Think Maps specifically in English Language writing classes was less explored to investigate its feasibility as a tool to stimulate ideas for writing. For example, in the context of ESL writing activities, Hyerle (2004) stated that students can learn to develop and organize their ideas well using i-Think Maps as it is a visual tool that helps students to move through their essays step by step using the thinking processes. It is used to generate ideas, develop contents and organize one's thinking processes (Al-Jarf, 2009; Budd, 2004; Murley, 2007). As a tool for language teaching too, i-Think Maps is also believed to assist the teachers in introducing or bringing words together. However, the feasibility of i-Think Map needed to be investigated in a Malaysian setting as well as among the low proficiency ESL students.

The low proficiency students need to be trained to utilise thinking strategies to improve their writing skills. As cognitive strategy has been found to be one of the main strategy that assists low proficiency students to focus on brainstorming for ideas (Chien, 2010), i-Think Maps which is based on a cognitive strategy, can be utilised effectively to provide a platform for the students to enhance their writing skills. Thus, this study which is a part of a bigger study investigates the use of i-Think Maps amongst low proficiency Form Four Malaysian students. This paper reports on the focus group interview data on the use of i-Think Maps in the low proficiency students' writing classrooms. The study was carried out with the three guiding questions:

  i) What is the perception of the low proficiency ESL students on the use of I-Think map in their writing task?
  ii) What is the perception of the low proficiency ESL students on the use of I-Think map on developing content in their writing task?
  iii) What is the perception of the low proficiency ESL students on the use of I-Think map on motivation to write?

Review of Literature

Writing, Thinking Process and Strategies

Studies conducted by Lay (1982), Zamel (1983), and Raimes (1985) on the second language writing process proves that writing is a complex process which includes brainstorming, multiple drafting, revision and final work. This is more challenging for ESL writers because the writing process between first language learners and second language learners are different since second language learners possess more than one language (Wang & Wen, 2002; Yu, 2016). Today, ESL learners need to secure a substantial amount of information for them to be successful. The greater part of the information is exhibited as words and the connection of those words in various settings. Nevertheless, some students find it hard to make associations among words and connection. Teachers must understand the distinctive ways students rehearse, obtain and memorize information in their brains. Buzan and Buzan (1996) posits that the human brain retains any information that is associated with patterns already in the schema or linked to other contexts being learnt at the same time. As such, writing skills have to be taught with the human brain in mind. The way students learn and visualize contexts must be considered in order to produce a good piece of writing. It is equally important to think about effective ESL writing strategies that support the learning processes that take place in the brain and facilitate writing.
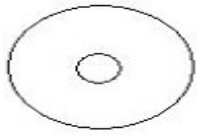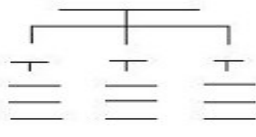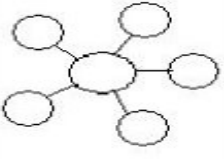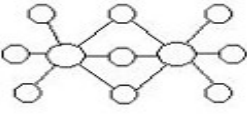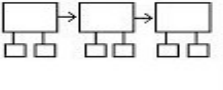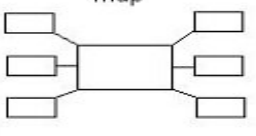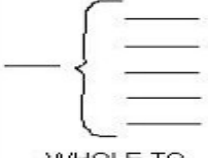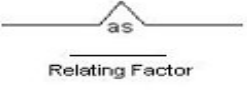
Teachers need to use writing strategies and techniques to develop and enhance writing as students may face a lot of problems while writing. If the students do not receive the necessary guidance to write, then as Hyland (2016) asserts, the writing task becomes extremely difficult and demotivating. The inability to use a proper writing strategy effectively for the target group, mainly for the low proficiency students will have little effect on the students' writing. Studies have shown that the use of writing strategies is proven to impact writing proficiency (Chien, 2012; Raimes, 1985). Thus, interventions that are related to the writing pedagogy must be given (Raoofi, 2014). In his study, Raoofi's (2014) identified that low proficiency students attempted to use writing strategies while writing in English. These L2 students planned, organized, monitored, revised and evaluated their own written product apart from using social and cognitive strategies. In the ESL writing context also, process writing has become the main focus in the writing classroom, and the teachers facilitate the students' progress by working with their written drafts with feedback given for further improvement (Giridharan, 2012). Process writing, accordingly, emphasizes cognitive thinking processes that may be used to write drafts before progressing into a written work that is well developed with many contents. It is simply a writing activity that involves learners in the process of writing; such as generation of ideas, drafting, revising, editing, etc. All these cognitive processes correspond to the cognitive process theory of writing developed by Flower and Hayes (1981). Other cognitive-based strategies in writing include the use of visual tools, graphic organizers and scaffolding.

i-Think Maps use in ESL writing

The use of i-Think Map in the Malaysian education system began in 2012 to promote higher order thinking skills among Malaysian students. This project was jointly created by the Malaysian Innovation Agency together with Ministry of Education Malaysia with the hope that students will be lifelong learners, creative and skilful at solving problems and providing solutions. In 2012, 10 schools were selected as pioneers for the

programme. Later in the year 2013, 1000 schools were introduced to it and finally to all the schools in Malaysia in the year 2014. The common visual language is believed to be used as a framework to improvise writing skills. By using Thinking Maps, students can comprehend a concept that is theoretical and present it on paper (Hyerle, 2004). The eight kinds of Thinking Maps that provide different thinking skills are shown in Table 1.

Table 1: David Hyerle's (2004) i-Think Maps

Circle Map	Tree Map	Bubble Map	Double Bubble Map
FOR DEFINING	FOR CLASSIFYING	FOR DESCRIBING	FOR COMPARING
Flow Map	Multi-Flow Map	Brace Map	Bridge Map
FOR SEQUENCING	FOR CAUSE AND EFFECT	WHOLE TO PARTS	FOR ANALOGIES

The use of i-Think Maps is based on the cognitivist theory that advances on the notion that learning is not just restricted to reactions produced from the stimuli given, but much more than that. According to Merriam and Caffarella (1999), experiences must be reorganized in order for the students to understand the stimuli given often taking place as a cognitive process. It is thought that background knowledge is required to differentiate and process new information, which is referred to as schema. However, Blanton (1998) noted that the activation of schema happens when the student is made aware of his own prior knowledge through the stimulation from the existing memory. Hence, Blanton (1998) posited that students learn through receiving, storing and retrieving information. The students' thinking characteristics that are important and that support the cognitive information processing theory must be learned. Students must be guided on how to retrieve their own prior knowledge by referring to external sources such as people, books, etc. If the students find difficulties in retrieving their own schema, they must consult the teacher to ensure that learning takes place. However, learners' needs and interests must be considered too to gauge the students to participate interactively in the learning process.

The use of i-Think Maps across the curriculum has shown diverse findings. Hickie (2006) reported that there was no significant difference in the students' performance in Mathematics after the use of i-Think Maps, however there was a notable change in the reading and language acquisition of the students after the instruction. In Leary (1999) and Singhand Kaur's (2004) studies, it was found that there was no significant

difference between the control and experimental groups after mind maps instruction. Nurlaila (2013) and Adi Purnomo (2014) who both conducted studies on the effectiveness of mind mapping on the descriptive writing skills of the students, found that the differences after the instruction of mind maps were statistically significant, and the students understood the lesson well. Weis (2011) who conducted a study on the effectiveness of i-Think Maps on students' higher order thinking skills found that the ability of the students to compare and contrast increased after the instruction. The first gap between these studies is that all of these studies concentrated on just one type of essay, so the essay type on which i-Think Maps instruction would be most effective cannot be determined. Secondly, most of the studies used L1 native speakers as the samples, and there are still very few studies on the effects of visual thinking tools on the writing proficiency of L2 students. Studies in the local Malaysian context revolved on the use of i-Think Maps for language teaching (Omar & Albakri., 2016; Othman & Mohamad, 2014). Omar and Albakri (2016) noted that the use of i-Think map promotes the generation of ideas and helped the students to improve both the oral and written language. This is because students gained confidence in presenting their ideas; a core component in communicating thoughts via visuals. However, the use of i-Think maps in the classroom needs to be taught and guided so that the students will be able to utilise the maps accurately in their ESL classrooms as noted by Othman and Mohamad (2014). As in the case of low proficiency students, the emphasis needs to be focused on the knowledge of language, mainly the vocabulary, structuring of the sentences and the use of accurate grammar so that the ideas can be communicated fairly well in their writing. This study, as such, investigated the use of i-Think Maps instruction and its effectiveness on low proficiency ESL students' overall written performance.

Methodology

The population of this study consist of secondary school students in South, Seberang Perai District in Penang. The selected school is a rural school sample and is categorised at Band 6 ranking according to the Malaysian Education's school ranking system. The band 6 and 7 is the lowest band in the Malaysian school ranking system whereby the students' academic performance is considered to be at the poorest achievement level. The student population consist of bilingual Malay and Indian students with a general low to moderate English level proficiency achievement in the Malaysian Form Three Assessment or also known as the PT3 examination. Of the 635 students, 325 of them were Malays and 310 were Indians. The form four student population consist of 118 students in four classes. From the form four student population, 52 low English proficiency students were selected for the study. The proficiency level is low in the spoken and written component in ESL tasks. However, the students can comprehend basic conversation although their communicative response will be generally code-mixed and code-switched in the Malay and English language.

The experimental group consist of 27 respondents and the control group consist of 25 students. A total of 12 low proficiency level respondents from the experimental group were selected utilizing purposeful sampling as proposed by Creswell (2008). The focus group interview was carried out in two groups since a smaller group would be able to share their views more effectively (Litosseliti, 2003) for a duration of approximately forty-five minutes. The distribution of samples according to gender is as below:

Table 2: Distribution of respondents according to gender

Respondents	
Male	n=6
Female	n=6

The focus group interview posed questions on the perception of the low proficiency students' use of i-Think map in their writing tasks, developing content in writing; difficulties as well as their motivation in their writing tasks. Specifically, the focus group interviews focused on the perception of the low proficiency ESL students on the use of I-Think map in their writing task; the perception of the low proficiency ESL students on the use of I-Think map on developing content in their writing task and the perception of the low proficiency ESL students on the use of I-Think map on motivation to write? The interviews were analysed based on the descriptive narratives provided by the respondents. The recorded interviews were transcribed and coded according to a thematic analysis.

4.   Results and Discussion

4.1: The perception of students on the use of i-Think map in their writing task?

Generally, all the respondents perceived the i-Think map to be useful and practical. The use of visuals as in the case of i-Think map, captured their interest and prompted them to consider of the possible words that they can utilize. The use of visuals to generate ideas and communicated thoughts help them to think about the topic in more detail. For example, respondent (R3) noted in his interview that the visuals relate closely to his interest of drawing and he considers this as a platform to utilize the vocabulary and organize his ideas more systematically.

> "…Nice to look at them maps. I like to draw, so I like to use them…
>
> (R3)

> " … I like to draw...so I like the maps. It helps *(me)* to come up with
> words. *(I)* Can organize my essays better. So I will use them to write.
>
> (R5)

> "…I very like drawing (*like drawing very much*), so nice one. I like to
> use the maps…"   (R6)

In addition, the respondents also considered the maps to be a guide to utilize different vocabulary as well as to expand their ideas and organize their essays as noted by some of the respondents:

> "…. very helpful as they are very nice to look at. I like Circle Map very
> much.... it helps me to think of words."   (RI)

> "…   I like the maps very much...especially the Circle Map. It helped
> me to think of words after the teacher guided me with the vocabulary. (R3)

"…It helps me to come up with the ideas. I like the tree map especially,
it's good as it forces me to expand my ideas."   (R7)

"…Last time I used to send in blank papers, now no more lah...as I
got ideas to write already what."   (R10)

Although the students perceived the i-Think map as a means to capture interest and help in their writing tasks, the students, however, needed consistent guidance from their teachers. These students were able to think of the ideas for the tasks in their mother tongue, mainly Bahasa Melayu and Tamil language but they did not have the language proficiency to translate their ideas in English. They faced difficulties, mainly in having the appropriate vocabulary and constructing grammatically accurate sentences. The respondents have cited the need for guidance in acquiring the necessary vocabulary and grammar knowledge to string accurate sentences.

"…I *(am)* weak in English, ….. but *(the)* teacher must teach *(me)* how to make the sentence. It *(is)* not easy...I translate all the words wrong(ly)...I feel very sad…   (R6)

" Some topics *(are)* very interesting one, I know some word, so okay *(I)* can use the maps. But *(for)* some topics I cannot use the maps...I *(am)* very bad in English…   (R9)

4.2: The perception of students on how the use of i-Think map help to develop content in writing

For developing content, the respondents have highlighted that the Tree Map is constantly used as it helps them to develop content. The Circle Map was useful in the beginning of the lessons, mainly in the brainstorming of ideas. Thus, i-Think Maps stimulates the thinking of the topic for these students. However, several respondents also noted the use of i-Think map that is closely related to their topic of interest. They are further motivated to utilize the i-Think map if the particular topic interests them. Since they have had personal encounters with a particular topic, they were more engaged in the construction of the maps and thus, the writing of the narrative was easier due to prior knowledge of topic and schemata. Likewise, if a new or unknown topic is introduced to them, they feel de-motivated to write. It was observed that they had difficulties in coming up with the sentences while trying to develop content during the intervention as well.

"…helps me to think of something. Last time I don't know how to start my essay…"   (R1)

"…can use Tree Map to get more ideas. I use "Wh" questions like what *(the)* teacher taught me.   (R4)

"…I feel okay. Can use the Circle and Tree Map. They connect to each other one…." (R2)

"…helps me to think of something. No need to sit down for very long time to write…. (R4)

"…feel more confident. Last time I will be stuck at the introduction. Now can start very fast… we can exchange ideas "… (R8)

As mentioned earlier, although the i-Think Maps stimulates the thinking of the topics for these students, these low proficiency students need consistent help from the teachers, particularly in constructing sentences and communicating the ideas in writing. For examples, the excerpts below generally focus on the issue of teacher guidance and choice of topic suitability.

"… Force me to write. But how to make sentences?." (R7)

"… Sometimes can...sometimes cannot. If interesting topic, I like, but difficult topics I cannot write…The cat story I cannot write. I don't have cats at home…" (R 11)

"… Use Circle Map, but I feel I improve little bit. I weak in English, so teacher help me make sentence. If nice topic I try…." (R 12)

4.3: The perception of students on the difficulties faced in using the i-Think map in ESL writing tasks.

Most of the respondents articulated their difficulties in producing the vocabulary and problems in constructing sentences in English. They tend to think of the words in their L1 and found it difficult to translate them into English during the writing sessions. The respondents noted that the i-Think Maps helped in generating and organizing ideas but they had difficulties in forming the sentences and communicating their ideas in the English language. Some expressed that they liked using the Tree Map as it helped them in developing more ideas, but the issue of translating their thoughts and ideas into sentences posed problems.

"…I have problems in grammar and sentence. Cannot think of sentences easily.
 I will always think in Bahasa only…" (R1)

"…I cannot think of the words in English. Very tough to create sentences…" (R2)

"… I have many ideas, I think in Tamil, but cannot write. *(When the)* teacher help then only can…" (R3)

"…Very hard one is Tree Map. Can get many ideas, but writing part, I don't

know…"   (R6)

4.3: The perception of students on their motivation in ESL writing task using i-Think map.

The i-Think Maps have generally instigated the respondents to write, however, it is not accurate to generalise that all students who utilise i-Think map may find it easy to utilise these maps in their writing tasks. The issue of grammar and sentence construction is repeatedly brought up in the interview. Another aspect that they fear is that they will not have the guidance of the teacher when they are left alone to complete a writing task, as in the case of examination period. This points to the question of the level of dependency on the teacher when i-Think Maps are used for the low proficiency students. The examples below further illustrates the points.

> "…Still not okay. How when (*during*) exam time, I have to write? Very scared. Don't know *(how)* to make sentence…"   (R3)

The use of i-Think map motivates the students to reduce their apprehension to write in English. Some respondents attribute their apprehension to their inability to generate ideas for the topic provided. Hence, the i-Think map guides them to elaborate and expand on the ideas that they have obtained.

> "…I can write a better essay now, I think. Now I'm more confident to think of the ideas.   (R4)

> "… okay lah, I feel happy when I write now. Last time I don't like to write. But now better because I am more confident in getting the points especially using the Circle Map…"   (R8)

> "…I always *(feel)* "frust" *(frustrated)* last time *(before)* when (the) teacher ask to write. Now feel better. More confident as can get the ideas from the Circle Map. If teacher help with the words, then I *(am)* more confident.   (R12)

Discussion and Conclusion

The use of i-Think Maps is an interesting method in capturing the low proficiency ESL students' attention in their writing tasks. The students consider the maps as useful, practical and allows them to continue their writing tasks further compared to earlier experience where they discontinue their writing tasks as they do not know how to progress further in their writing tasks. This concurs with Raoofi's et al. (2014) study whereby the low proficiency students attempt to utilise the maps in their writing tasks. Thus, the use of iThink maps amongst the low proficiency students as in the case of this study is found to have reduced the apprehension in writing and allows interactive sessions in writing. The students also considered the writing activity to be more interesting and had reduced the monotony of learning. As writing involves a variety of complex cognitive processes of the brain; drawing, as in the use of i-Think Maps sets the stage for these low proficiency ESL students to begin writing. The low proficiency

students enjoy drawing the maps, and i-Think Maps have an effective implication on their attention in their learning process. Although they have difficulties in formulating the ideas in English language, they managed to write their narrative essays with prior guidance on the vocabulary and sentence construction from the teacher. However, it is important to note that the teachers play an important facilitative role in utilising iThink maps in the writing tasks for this low proficiency ESL students. This concurs with Noraini and Khairul's (2014) study that asserts the crucial role of the teachers as a facilitator in the use of i-Think map among the low proficiency ESL students. The students are able to develop content in their mother tongue but need to depend on the teachers to assist them with the necessary vocabulary and sentence formation. The teachers, likewise must ensure that the use of mother tongue should be limited and the use of English vocabulary and phrases be consolidated for further discussion and writing process. Another crucial consideration for incorporating i-Think Map into the writing process is the selection of topic. This is evident from the focus group interviews whereby some students expressed their apprehension with the choice of topics for writing. The students are prone to write better if they are familiar with the topic or when the topic is more related to their own personal interests. This concurs with White (1976) and Witte's (1988) study that found the students perform better in the topics they were interested in. The background knowledge of the topic, will enable the students to assemble the ideas and during the writing activity, the focus would be in associating the ideas with the accurate vocabulary, cohesive devices and structuring the sentences correctly. This process, if carried out repeatedly, will help the students to learn vocabulary, practice writing more accurate sentence and acquire the necessary writing skills from the learned pattern of schema (Blanton, 1998) which enables them to retrieve the information needed for the specific task. Having controlled the apprehension of writing, the students may proceed further into the next stages of writing. With the interest and motivation, the students can be guided further to focus on the various language skills needed for writing. Otherwise, the teacher will not succeed in involving the low proficiency ESL students in the writing process.

Based on the implementation of the i-Think Map in ESL writing tasks among low level proficiency students also, it is recommended that the teachers create a student-friendly classroom atmosphere to involve active participation during discussion. The teachers need to identify the patterned schemata that the students are inclined to display during their discussion and pre-writing process so that the students feel confident with their discussion and written product. The general perception of the students in the use of i-Think map, as in the case of this study has shown positive impact, particularly in promoting the motivation to complete their ESL writing tasks. However, it would be beneficial to study a bigger population of low proficiency students to investigate its effectiveness and identify possible ways to enhance the writing proficiency of students using i-Think maps in the ESL classrooms.

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