

UTILIZATION OF STRATEGIC THINKING SKILLS IN SUSTAINING AND MAINTAINING STRATEGIES IN LANGUAGE LEARNING PROCESS

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ABSTRACT

English as a second language has been learnt by all students in Malaysia throughout their years in schools and higher institutions. The amount of years students learnt English is seen as adequate to enable them to perform the language outside classroom context and to score better grades for their English SPM (Sijil Pelajaran Malaysia), a pre requisite exam for all students before entering matriculation, pre-university or diploma. However, to dismay many are still alienated to learning this language. Hence, this paper draws on research to exploit strategies in strategic thinking skills in order to sustain and maintain learning strategies especially in the process of engaging language learning. A researcher-developed taxonomy was exercised on 61 school students preparing for their SPM exam of a local school in Rompin District, Pahang. The students were facilitated by 6 undergraduates volunteer to assist on students' progress. A learning module was developed to engage in learning process via internet and face to face consultation when needed. Motivated Strategies Learning Questionnaire (MSLQ) adapted to current context was used to measure the learning strategies, motivation and learning awareness in the pre and post treatment to seek students' interest and motivation in language learning. Result showed that the taxonomy had positive effect on learning performance and self regulation. Both facilitator and students also display better effort in sustaining and maintaining strategies in learning process. The MSLQ result also displayed that apart from motivation, strategies is crucial in enhancing language learning and achievement. Finally, it is hope that this paper can be a guide in improving and increasing learners' achievement.

Keywords: Strategic Thinking Skills, Metacognition, Language learning

1. Introduction

Technology engagement for preparing students undertaking SPM in certain parts of Malaysia district is far from practical. Scenarios of learning English in rural schools where computer laboratory are present depicted poor respond from students as they showed little interest in learning the language. Hence, being aware of what is important for learning to take place specially in the world of technology and internet explosion, approaches for teaching and learning language in English via online among students should incorporated certain strategies that denote the use of thinking skills and self regulation to increase learning achievement. This awareness should be taught explicitly to them so that they are capable of dealing with their own cognitive processes which enable them to understand, to control and to manipulate their own knowledge to become efficient learner. According to Austin Francois (2004) strategic thinking must be developed as it is not a typical skills found within organization. Thus, learning to think strategically is important as it helps students to

understand on how a task should be managed and assessed. As such, strategic thinking skills requires students to adopt discipline in order to maintain and sustain interest and to self regulate learning to enable learning process to take place according to students' ability.

In order to develop language learning achievement students need to go through the experience of learning the language. They need to process the language using their own capability and ability. They need to see and feel in their own ways and pace through according to their own needs. Therefore they will be able to make sense of their own achievement and the needs to progress further. This enforcement however required high motivation and patience. It required the ability to sustain and maintain the interest and motivation to learn. In the effort to maintain and sustain learning interest and motivation students need to learn to self regulate their learning.

Self regulation is a key element that denotes students to process and progress learning at their own pace. Students with good self regulated learning empowers themselves with good learning habit. They are capable of decision making and solving problem, monitoring and evaluating their own learning progress. Regulation of cognition enables individual to control their cognitive efforts of planning, monitoring and evaluating (Baker and Brown. 1984, Susan E, Israel.et.al 2005)

Therefore, students with low self interest in language learning need a platform to enable them to learn to self regulate to accelerate in their learning performance. The teaching of thinking in an organized and structured forms proved to initiate better understanding, retention and application of what is being learnt. Structured based models are introduced as a guide to mastery and effective learning approach. Research has shown that novice learners need guidance in exploring learning to think compared to experts which is dependent on seeking alternatives ways. Hence, instructional models of thinking facilitate learning more meaningfully and effectively.

2. Strategic Thinking Skills Taxonomy Process

A taxonomy consisting of metacognitive skills of panning, monitoring and evaluating was developed based on Bayer's study in teaching thinking. He proposed that in order to get students to think it is important that thinking be taught explicitly (p.34, 1987) The taxonomy converted into an algorithm of Strategic Thinking Skills Process Indicator were taught online to elicit learning progress and analysis of data. The taxonomy consists of six cognitive skills expanded from the initial three of planning, monitoring, evaluating comprise of decision making, checking and revising. It was elaborated to examine related cognitive functions of similar but distinctive skills. The six cognitive components enable students to process problem solving and decision making with metacognitive functions more in-depth. Each thinking components were accompanied with activities that enable thinking to be practice and applied. Through contextualization of cognitive engagement and activities with language as medium of instructions, it is easy to build a thinking foundation as students have something evidence to channel them to acquire learning to think and to be able to process the cognitive functions to establish means to arrive to the goals. The activities of thinking process is explained in details, put in simple language and able to be executed.

The activities of the cognitive elements derive from the strategies stimulate self regulation process for pacing through progress according to students capability. Thus, if a student is a slow learner he might need to go through each of the activities and organize his thoughts, plans and monitors his own learning process until he is satisfied with his own achievement. This process differs for each student depending on how much of previous knowledge they have. The more knowledge they have the faster they are in gaining new knowledge to the strategies applied.

The six cognitive elements of decision making, planning, monitoring, checking, evaluating and revising were cognitive elements that were infuse to be practiced by students strategically. The cognitive elements accompanied by activities required students to engage and think of their actions pertaining to the needs of their own learning and requirement of task. Simultaneously, the activities and students engagement enable self regulation and metacognitive skills to take place as the activities require more than one engagement and one trials, in other words until the students feel that they have achieved their goals of learning. Thus, this strengthens their engagement on learning process and progress achievement. The longer the students dwelt on each activity the more effort they make to sustain and maintain learning process. However, knowledge of cognitive and metacognitive strategies is usually not enough to promote students achievement; students also must be motivated to use the strategies as well as regulate their cognition and effort (Pintrich & De Groot,1990). As such, to engage in strategic thinking learning process students themselves also need to be fully motivated.

3. Language Learning and Strategies to Sustaining and Maintain Process.

There are ways on how learner emphasis on processing new information and what kinds of strategies they employ to understand, learn or remember the information (Mitchell, Myles, 2004). This is where I believe that online learning aids a student because of the strategies and approaches it was made to have, such as defined from second language acquisition theories. Some of the theories define learning strategies as "... any sets of operations, steps, plans, routines used by the learner to facilitate the obtaining, storage, retrieval, and use of information." (Wenden and Rubin, 1987). Rubin, who pioneered much of the work in the field of language learning strategies, makes the distinction between strategies contributing directly to learning and those contributing indirectly to learning. According to Wenden and Rubin (1984) there are of two main types, being the strategies contributing directly to the development of the language system constructed by the learner: Cognitive Learning Strategies and Metacognitive Learning Strategies. In cognitive learning strategies the operations used in learning or problem solving requires direct analysis, transformation or synthesis of learning materials in which students need to clarify, infer, deduce, induce, practice, memorise and monitor. Metacognitive learning strategies used self regulation or direct language learning that involve various processing such as planning, prioritizing, setting goals and self management that is drawn from affective strategy, social strategy and communication strategy.

Another school of thoughts such as connectivists advocate that a learning organization whereby there is not a body of knowledge to be transferred from educator to learner and where learning does not take place in a single environment; instead, it is distributed across the Web, and people's engagement with it constitutes learning. Advocators' such as Siemens and Downes proposed teaching strategies without formal teaching and dynamics that allow the educator to have the role of facilitator or a total absenteeism from the learning process (Downes, 2006, 2007). Such learning is most appropriate for this type of learning event involves the active engagement of people with resources in communication with others, rather than the transfer of knowledge from educator to learner. Hence, the strategies integrated with online learning gauge students ability to not only learn about language but to have the opportunity in navigating and making use of the wealth of resources available on the internet to assist in learning language. Therefore, using online learning as basis for communication in teaching language learning enables students to interact with their teachers in limited space and time.

Apart from learning strategies, to sustain and maintain interest is important which can only be achieved if the students are highly motivated. Therefore, students need to be focused, aware of needs and importance of learning. Instructional tasks involve a range of complex learner behaviours

that can last for a considerable period (e.g. up to several hours), and it is unlikely that the learner's motivation during this period will remain constant. Thus, instead of assuming a simple and stable 'state motivation' component to account for the situation-specific aspect of task motivation, a more accurate characterisation may be provided by taking a *process-oriented approach* that, as the term suggests, looks at the dynamic motivational processes that take place during task completion (Kormos & Dörnyei. 2004). As such, the study also gauge in process-oriented learning approach.

Process oriented learning approach engage students in authentic tasks, assist students with producing knowledge bases that promote the application of information and diversity of thought (Brandt, 1992). Zohar and Davis (2009) further explains that this explicit learning enables components of the thinking can be publicly discussed and negotiated in class. The strategic thinking skills taxonomy enables cognitive procedures, making generalization and drawing rules regarding a thinking strategy, naming the thinking strategy explaining when, why and how such a thinking strategy should be used, when it should not be used what are the advantages of not using appropriate strategies and what task characteristic call for the use of the strategy.

Hence, this paper draws on research to exploit strategies in strategic thinking skills in order to sustain and maintain learning strategies especially in the process of engaging language learning

4. Methodology

4.1. Participants

Sixty one secondary schools students from Rompin Pahang sitting for their SPM were selected based on their mid year result. They were divided into six groups; each group was assigned to one undergraduate student facilitator. Three groups were selected for intervention of taxonomy and the other three for control group.

4.2. Task Procedures

The students sat for an English pre-test of grammar and writing before engaging with Strategic Thinking Skills Taxonomy. The students were grouped according to their test results. The students follow their usual classroom lesson during school times but after school intervention groups will engage with online learning using modules prepared by the researcher for the study. The formal study took 8 weeks of 125minutes per week but at least 2 hours of online learning with their facilitators.

For intervention groups the first meeting students were introduced with the taxonomy and they were given 20 minutes to practice on the software. The first lesson begins on their second meeting and on the fifth meeting they sat for a trial test on grammar and writing. The test were tabulated as comparison to their final test which was taken on week eight. The trial test result was reported to the students and discussion on the test paper was conducted. The grammar test consists of part of speech while writing focused on the use of the parts of speech in writing. Students were to monitor on their performance and progress during the intervention period with the help from facilitators in charge. On the first stage of decision making, students need to decide on which part of speech that they do not know and need improvement. On the second stage of planning they need to plan on how to divide time to learn the part of speech. Stage three and four they need to monitor and check on their learning performance and progress. This performance were than evaluated by the students and their facilitators (stage five) and the last stage six students will revise their lesson if their performance is not as expected. Students will only move to the next stages when they felt that they

have improved on the learning.

Control group were engaged with workshop schedule. The students were also facilitated by undergraduates students using textbooks introduced by their teachers and online engagement were use for extra learning.

5. Findings

Table 5.1 presents the mean scores for the quantitative trial-test and final test for grammar of the intervention group (n=30) and control group (n=30). T sampled pair test was used to compare two groups with each variables.

The analysis for the grammar for the final test shows mean difference of 33.46 for the intervention group, compared to control group which has an increase of 1.77. Grammar test for trial and final using *t test* showed significant difference $t(29) = 30.88, p=.000, \alpha = .05$

Table 5.1: Mean Score and Standard Deviation of Intervention Group and Control Group Grammar Test.

	Grammar					
	Trial		Final		Final	
	Mean	SD	Mean	SD	t.	sig
Intervention	33.73	2.741	67.63	3.891	30.886	.000
Control	32.40	3.539	34.17	4.669		

Table 5.2 shows significant difference in the final writing test where intervention group (M=38.50, SD=6.124) and control group (M=35.00,SD=6.131), $t(29)=2.501, p, p<.05, \alpha = .05$. Final writing test for intervention is higher 3.50 than control group.

Table 5.2: Mean Score and Standard Deviation of Intervention Group and Control Group Final Writing Test.

	Final			
	Mean	SD	t.	sig
Intervention	38.50	6.124	2.501	.018
Control	35.00	6.131		

The analysis in Table 5.3 of cognitive activity showed the self-regulation of strategic thinking skills component of evaluating skills (E) and revising (R) is highly attempted by students ,E (M=11.90) and

R (M=12.73) compared to other strategic thinking skills. For monitoring skills (M) the mean is 11.83, with less emphasis for both decision making skills (DM) with (M=10.73) and planning skills (P) with (M= 10.77).

Table 5.3: Metacognitive component of self-regulation

	t	df	Sig. (2-tailed)	Mean Difference
P	1.944	29	.062	.767
M	4.246	29	.000	1.833
E	2.895	29	.007	1.900

The analysis for the MSLQ for the learning strategies shows an increase of 14.07 for the intervention group, compared to control group which has an increase of 22.53. While the motivation section post test for the experimental rose to 75.90, which are 6.04 higher than control group 69.86. Section C of trial- and final-test using *t test* showed significant difference $t(29) = 34.80, p=4.138, \alpha = .05$. However, learning motivation of Section B in a pair sample *t test* revealed that there is no significant difference between the two groups $t(29)=6.450, p=1.556, \alpha = .05$

Table 5.4: Mean Score and Standard Deviation of MSLQ Test for Intervention and Control Group MSLQ Section C and B

	Learning Strategies (MSLQ)		Learning Motivation	
	Pre	Post	Pre	Post
	Mean	Mean	Mean	Mean
Intervention	235.03	249.10	70.45	75.90
Control	260.57	283.10	69.21	69.86

6. Discussion

From the two language skills tested, intervention group shows that the use of strategic thinking skills taxonomy has significant effect on language achievement. Self regulation also played an important part in the contribution of process learning. This is shown during the execution of the activities students who are active often posed complex problems, find different ways to achieve targeted goal, seek answers from peers and teachers, monitored task rigorously and always revised strategies to suit learning goals.

Facilitators also played an important part to listen to the processes students used to solve those problems, and encouraged them to seek different methods of finding answers. By contrast, students who were less or not actively participating emphasized basic fact recall, getting answers quickly, and working alone rather than in groups.

Parts of speech used for the test also showed that students were able to write simple sentence structure effectively well compared to the trial results. As for intervention group, result increased

due to prolong engagement via online learning compare to limited time and space given to control group. The strategies instill students to maintain and sustain their effort to improve in learning performance. Facilitators also improved in their language learning via strategic planning to help improved on students achievement.

Motivation, which is usually an extraneous factor that could affect learning performance, showed positive feedback for both groups. Therefore, this suggested that the positive results in the final test for grammar and writing and the improvement of the learning process was not by chance and that the online learning did contribute to learning performance in the two tests.

However, the study is not without limitation where time is the main factor for better retention of the individual themselves. Second, the internet retrieval in this area is often slow that it hindered learning and attention focus. Third, the taxonomy is of high level of skills that we had to carefully choose only simple ones to be performed by students and the reduction of the numbers of activities however did not lessen the students' interest to achieve good results and progress in learning. Fourth, code switching to enable students to learn the language is almost impossible not to be used as they have poor language background. Therefore, it is hoped that this study can be improved with focused to other areas of learning and approach to managing task.

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