

## STRATEGIZING LEARNING EXPERIENCE THROUGH E-LEARNING PLATFORMS TO ENHANCE CREATIVE POTENTIAL AND LANGUAGE PERFORMANCE

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### **Abstract**

*Creativity is a rare topic in language learning conversations, often overshadowed by the emphasis on student performance or achievement in language competencies. With technology, discussions mostly linger around the application of appropriate teaching approaches and/or learning strategies. Yet, with its prowess, technology provides huge opportunities for teachers to engineer learning experiences that could bring about student creativeness. Such learning experiences, if appropriately and cognitively strategize could motivate students to enhance not only their creative abilities but also language performance. In this presentation, I will share the development of a learning model called Creative Strategy Learning Model (CSLM) which integrates creative and strategic thinking taxonomies to assist learners to use their creative cognitive abilities to cognitively strategize their learning. In addition to the in-class learning experience, e-learning platforms such as Moodle and Edmodo were used as a platform to create a learning experience where students can communicate their ideas and follow their progress in the speaking and writing classes. The application of this model in the speaking and writing classes illustrates its importance in assisting students to enhance their public speaking performance, and essay writing skills. Student feedback revealed that the opportunity to see the performance in their creative ability is a boost to better improve their speaking and writing abilities.*

**Keywords:** creative thinking; strategic thinking; e-learning platform; Creative Strategy Learning Model; motivation

### **1. Introduction**

In an era dominated by the constant and continuous advancement of technology and its tools, utilizing technology in language classes is not only a norm, but also encouraged to provide better and different teaching and learning experiences. This technological dominance is apparent when there are clear effects of the fourth industrial revolution (4IR) on education with the introduction of the Education 4.0 framework and its alignment to the 4IR. Through Education 4.0, four learning skills deemed important as the 21<sup>st</sup> century learning skills, and essential for survival in and to face the challenges of the 4IR era are identified: Communication, Collaboration, Creativity and Critical Thinking (Md Abdul Haseeb, 2018; Zimmerman, 2018). The pedagogical implications therefore indicate the need to incorporate these skills or parts of them into the teaching and learning approaches and strategies to prepare students in facing the challenges of the 4IR and the changes that lie ahead. It is also essential that such skills can be integrated into students' learning experiences through the use of technology.

Creativity is a natural ability each individual possesses, and it can be learnt and taught. Developing creative abilities is important as a requirement for survival in the 4IR. By integrating the focus on creativity in language classes, students' strengths can be developed, and they can be motivated to enhance their learning experience and language performance (Zimmerman, 2018). Though discussions and studies on creativity in language education are increasing (Richards & Jones, 2015), such literature is still scarce especially in the appropriate learning and teaching strategies to develop students' creative abilities and language performance. This paper attempts to address this concern. Through empirical studies, a learning model was developed which emphasizes students need to cognitively strategize their learning through a process-oriented learning experience and continuous feedback on their creative ability and performance (Kassim, Osman & Abdullah, 2014; Osman & Kassim, 2015). This paper will also share how this model was applied in the speaking and writing classes.

## **2. Creative Strategy**

Ample literature on creative strategy can be found in the business and management (Bilton & Cummings, 2010; Duggan, 2013), advertising (Drewniany & Jewler, 2013; Mior Harun, Teo, Fitri Hussin & Nasir, 2013) and nursing education (Duane & Satre, 2014; Good & Bishop, 2011; McAllister et al., 2013) fields. Definition of creative strategy in these fields differs. In advertising, creative strategy looks at the guiding principles that shape how advertising content and presentation should be designed (Wei & Jiang, 2005), and the studies to examine this principle have also been conducted on online advertising (Golan & Zaidner, 2008). In nursing education, creative strategy integrates different learning strategies such as collaborative learning, active learning and critical thinking in order to enhance nursing students to solve problem (Duane & Satre, 2014; McAllister et al., 2013), and studies in this field have also included the use of technology (McAllister et al., 2013). In business and management, Duggan's (2013) creative strategy combines creative ideas and strategy in order to solve problem and innovate. By applying the learning-and-memory model, creative ideas can be formed by making strategic analysis of the situation. Studies of creative strategy in these differing fields however are similar in terms of the inclusion of knowledge, and higher order thinking skills such as critical thinking to improve performance, innovate new ideas and products and increase sale (Kassim et al., 2015).

In the context of this paper, creative strategy integrates strategic thinking and creative thinking taxonomies in a strategic instructional process where cognitive processes and continuous assessment are emphasized. This creative strategy model is called Creative Strategy Learning Model (CSLM). This model was developed aiming to assist students to experience a strategic learning process where knowledge is constructed, creative abilities are enhanced and performance in language abilities is improved (Kassim et al., 2015). Previous studies examining the capacities of strategic and creative thinking skills have proven helpful to assist student construct knowledge, solve problem and improve skills, with the inclusion of technology utilization (Kozbelt, Beghetto & Runco, 2010). This will be elaborated further.

### *Strategic thinking*

Strategy is a common term in the business world, and is always associated with systematic planning, solving problem, producing ideas and innovating (Abraham, 2005; Bonn, 2001; Graetz, 2002; Liedtka, 1998), and strategic thinking is an important competency of this construct. In earlier studies of strategic thinking, this construct has been defined as a systematic and continuous cognitive process (Liedtka, 1998), the process of finding different alternatives (Abraham, 2005), the ability to innovate in an uncertain environment (Graetz, 2002) and the ability to solve strategic problems (Bonn, 2001). Many of the recent literature have also associated the importance and need of creativity for strategic thinking (Duggan, 2013; Moon, 2014). The literature basically drew a basic guideline which includes the importance of having sufficient knowledge needed for the process of finding defined patterns of the stated goals.

In teaching and learning, though the literature in language education is scarce, strategic thinking has been used in different areas with the main goal of solving problems (Duane & Satre, 2014; McAllister et al., 2013; Wei & Jiang, 2005). Strategic thinking is regard as a systematic cognitive processes where learning instructions are analytically strategized, and for some, creatively, so that students are able to find alternative ways or solutions in order to achieve the learning goal (Moon, 2014). Applying strategic thinking into the language teaching and learning therefore might be able to assist students to enhance their language skills and proficiency in the target language. There are many ways of how learning can be strategized such as peer assessment, team feedback, and questioning. This papers aims to further elaborate on the use of questioning in integrating strategic thinking into the new CSLM model.

### *Creative thinking*

Creative thinking is discussed as a creative process in creativity studies, and it is one the six dimensions of creativity. It is one of the most researched dimensions of creativity, however the literature in language education is still scarce. Knowledge is identified as the main element for creative cognitive processing to occur, where information is processed for knowledge construction (Runco, 2004). Creative thinking occurs when individuals are able to cognitively associate prior knowledge and processed knowledge (Mednick, 1962), and through this, new knowledge is generated. When remote associations are generated, that is, when new, original and different ideas are created, it becomes the products of the creative thinking process. This indicates the importance of knowledge in creative cognitive process, and how knowledge will influence the process itself and the outcomes of the creative process (Kassim et al., 2015). Verification is another term associated with creative process; it looks at the process of assessing, amending and correcting the outcome of the creative process (Wallas, 1962). Therefore, knowledge is an essential element of creative thinking which will determine the process and outcome of the creative cognitive process, and which need to further assessed and refined.

Research into creative thinking has also looked at its relation with intelligence (Guildford, 1975), problem solving and innovation (Torrance, 1965; Runco, 2004; Kassim et al., 2014), and creative personalities (Puccio & Grivas, 2009). In teaching and learning, specifically in language education area, literature on creative thinking is scarce when more focus is given to critical thinking. Some of the available literature measure students' creative thinking and compare it to other abilities such as divergent thinking, bilingualism and personality, and other general creativity studies looks at how teachers use materials, tools and strategies creatively to assist students in the language learning. This paper aims to further elaborate on how students' works can be assessed for creative improvement and language performance.

### 3. The Creative Strategy Learning Model

The Creative Strategy Learning Model (CSLM) integrates the strategic thinking and creative thinking taxonomies, which emphasis is on the systematic instructional process of helping students to cognitively strategize their learning for improved learning performance and creativity enhancement. Figure 1 depicts the CSLM. Through this learning model, there are four (4) continuous stages that students have to go through in completing a task: Learning, Metacognition, Verification and Products.



Figure 1. The Creative Strategy Learning Model.

#### *Learning*

Learning is the first stage of the CSLM. Discussions on both strategic thinking and creative thinking have put great emphasis on knowledge, and how it will affect learning and its outcomes. Learning in CSLM is therefore defined as the amount of prior knowledge the students have and the knowledge that would be acquired and constructed during the task. Knowledge construction should also be a continuous process because any new knowledge will function as prior knowledge in any subsequent learning tasks. Students should always be encouraged to read and enrich their knowledge, and for any given tasks, teachers should also be responsible to provide appropriate tasks to entice students toward knowledge acquisition and construction. Knowledge sharing between teacher-student or student-student can be done through the use of technology. For use inside the class, e-platform such as Padlet

can be used while social media such as WhatsApp and Instagram can be used if communication are done outside the class hour.

### *Metacognition*

CSLM proposes Metacognition as second the stage. The key is to guide students to strategically plan, monitor and evaluate the task given. CSLM proposes that teachers apply critical questioning as feedback on students’ tasks. The need to answer the questions will require students “to reflect on their own cognitive processes, assess the outcomes of their task and work on to change and improve their work” (Kassim et al., 2015, p.922). If this cognitive reflection is done continuously and systematically, students are able to evaluate and reevaluate their tasks, indirectly reflect their abilities, and in order to improve them, they need to strategize their learning in completing the task.

Figure 2 illustrates the strategic learning process highlighting the critical questioning which can be applied during the Metacognition stage. Any WH-questions that would trigger students thinking would be sufficient for application at this stage. Teacher’s remark is another way of allowing students to evaluate their work. Providing continuous feedback is a meticulous so teachers need to careful in selecting the e-learning platform to do this. CSLM has so far been tested using Edmodo and Moodle, and they are found suitable. Other e-learning platforms should also be tested for their applicability.

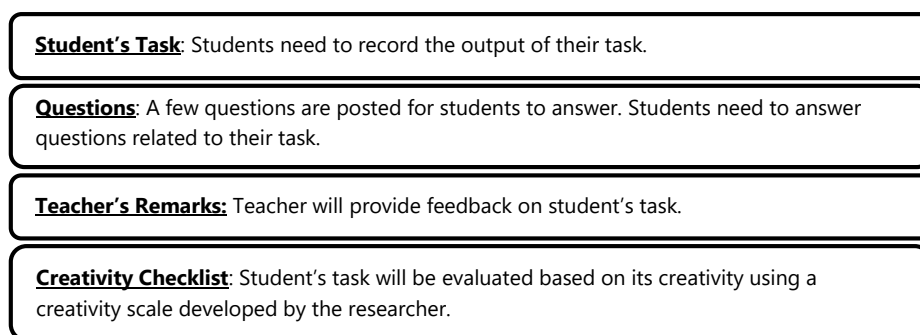


Figure 2. A Summary of the Strategic Learning Process.

### *Verification*

At the third Verification stage, students’ tasks are further assessed accentuating the creative values of the work and creative abilities of the students. At this stage, students are required “to judge and value their work, and verify that they have achieved the objectives of the learning process” (Kassim et al., 2015, p.922). This model highlights the importance of creativity, and as such, CSLM proposes that students’ works are verified based on creativity level. The example given in Figure 2 shows that a creativity checklist can be used to verify students’ work. Any instrument assessing creativity can be employed.

### *Product*

The last stage is Product. Technically, this is where students would product their works such as a written essay, an outline for a speech or a video resume. The assessment of the tasks itself can be done after the products are presented to the teacher, facilitator or their peers. This is however not the end of the model. Any new constructed knowledge at this stage can be used by the students as prior knowledge for the next learning tasks.

## **4. Methodology**

I have conducted a few studies to investigate the application of CSLM, in speaking classes and writing classes. The studies were conducted at tertiary level.

### **4.1 Study one**

A few studies have been conducted in a public speaking course, which is an elective course offered to third year students at the university. Explorative research design was employed with the administration of the CSLM as the learning model, informative speech as the learning objective and course content, the Competent Speaker Speech Evaluation Form (CSSEF) developed by Morreale et al. (2007) to assess students' speech delivery, a researcher-developed creativity checklist and an interview protocol. Moodle and Edmodo were used as the e-learning platforms at different stages of the studies. Figure 3 illustrates an example of a screenshot of how the CSLM was applied using Moodle. Findings of these studies will be presented as one dataset.

The CSLM was applied in six phases of the speech planning process, and the students' learning process was strategized based on these six phases. The phases are:

- 1) Topic selection
- 2) Audience analysis
- 3) Information research and evaluation
- 4) Outline development
- 5) Presentation aid selection
- 6) Practice and use of delivery strategies



**Figure 3.** A Screenshot of How the CSLM Was Applied Using Moodle.

## 4.2 Study two

A few studies have been conducted in writing classes, and the studies focus on the 5-paragraph informative essay. This paper will report only one study where quasi experimental two-group pre-test and post-test design was employed with the administration of the CSLM as the learning model, informative essay as the learning objective and course content, Motivated Strategies Learning Questionnaire (MSLQ) developed by (Pintrich, Smith, Garcia & McKeachie, 1991) to examine students' view of their motivation and learning strategies. Moodle and Edmodo were used as the e-learning platforms at different stages of the studies.

Similarly, in writing classes, the CSLM was applied in five phases of the essay written task, and the students' learning process was strategized based on these five phases. The phases are:

- 1) Topic selection
- 2) Information research and evaluation
- 3) Outline development
- 4) Essay draft
- 5) Final draft

## 5. Findings and Discussion

### 5.1 Findings of the CSLM as applied in a public speaking course

The CSLM was applied in a public speaking course where students' learning was strategized in the six phases of the speech planning process. I will exemplify how students were able to evaluate their works (i.e. Metacognition stage) after Critical Questioning (i.e. Metacognition stage) and Creativity Check (i.e. Verification stage) was performed on their submitted works. Students were able to improve on their works and resubmitted a much improved works (i.e. Products stage).

**Table 1.** Application of the CSLM in the topic selection phase by R5 and R52.

	Initial Task Submission	Task Resubmission
Topic Selection	My Favorite Music	How Music Inspires Us
Why do you choose this topic?	Music is my hobby. I love music very much.	Music is a great inspiration. Music has inspired me, and I want to share this experience with my friends.
Creativity score	48%	78%
Topic Selection	Football	Similar Traditional Games in Asia
Why do you choose this topic?	I love to play football, so I want to talk about football.	Malaysia and some Asia countries have some cultural similarities. Some traditional games are played in some Asia countries. But with different names and rules. I want to share this.
Creativity score	35%	75%

Table 1 shows how CSLM was able to help students improved during the first phase of the speech planning process, which is their topic selection. After the initial task submission, students need to answer a few questions regarding their submission, and in this example, the students provided the reasons for choosing the topic. A creativity check of their submission was given to them by the teacher on the task submission and their responses to the questions. The findings in table 1 shows how the creativity check influenced their submission. The students then evaluated their works, and submitted a much improved version. In the interview with some of the students, some of them admitted that the creativity score was one the main reason they resubmitted their work.

R1: *I always look forward to my creativity score. If it is low, I will try to resubmit my task.*

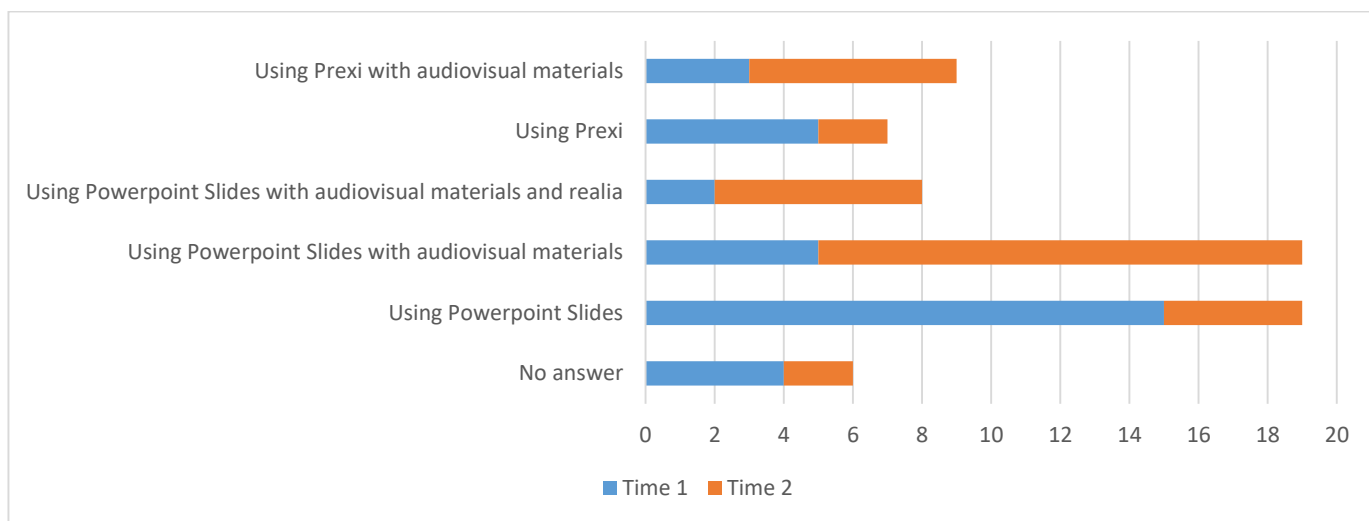
R25: *Yes, I want high creativity score. So, I think about it and change my assignment.*

R44: *It's kinda different to get creativity score in English classes, but I like it. The higher the better.*

R48: *...the creativity score. I got quite bad. So I need to change it.*

In the fifth phase of the speech planning process, students were asked to identify and suggest how they would deliver their presentation and the types delivery aid they would be using. Responses of two groups of students (N=34) were analyzed, and Figure 4 depicts the changes students made after they have to answer the Critical Questioning and creativity score were given. Questions that were given to the students included “Would your chosen presentation aid help to attract the audience?” and “Would you chosen presentation aid help you to effectively share your information?” Analysis of students’ responses also grouped using tangible materials, using things around me, and using things in the class as realia.





**Figure 4.** Students’ Responses (N=34) for Choosing Presentation Aid from Task Submission (Time 1) and Task Resubmission (Time 2)

The findings in Figure 4 show that students have the necessary changes after evaluating their task submission, and many have opted to include audiovisual materials into their presentation instead of only depending the Powerpoint slides alone. The findings also reveal that Powerpoint slides is still a common and popular presentation aids compared to other tools. In the Interview session, students were also inquired about the Critical Questioning that they had to answer while submitting their tasks. There were a mixed of positive and negative responses from students regarding this.

R4: *At first I didn't like to answer the questions. But after the feedback from my teacher on my task, I understand how the answering the questions can help me submit better task.*

R53: *I like it. It makes me think and I can change my submission and I can get better marks.*

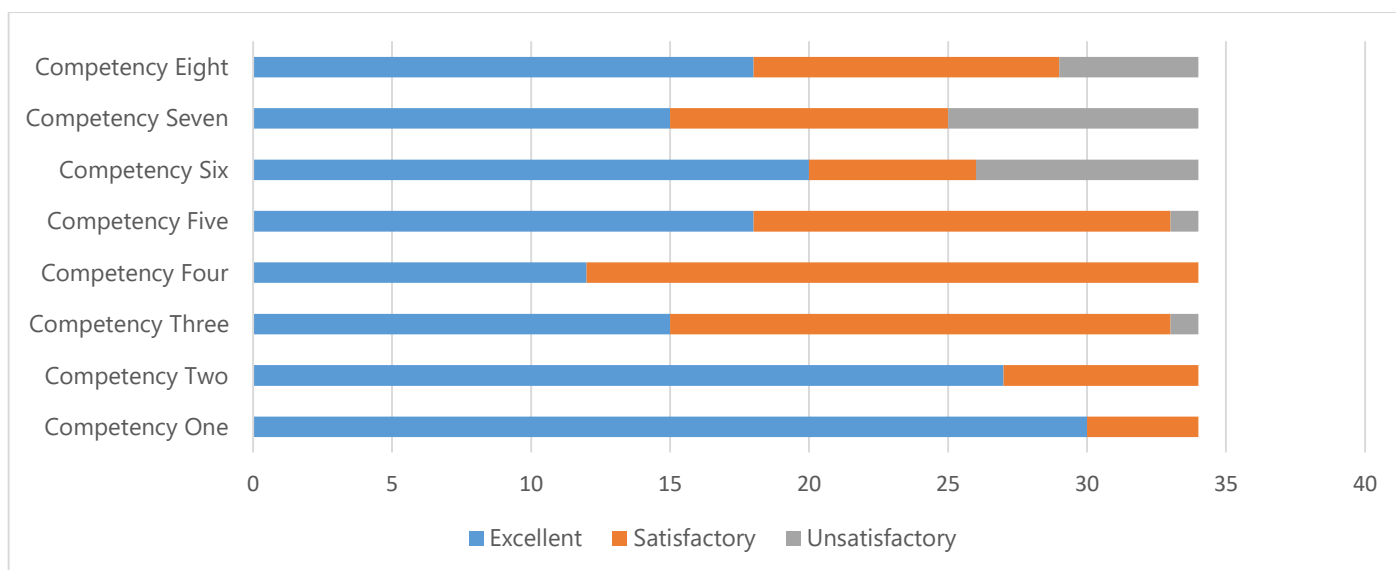
R22: *Ok. Ok. Ok with me. I can evaluate the task I submit... But too many work.*

R10: *Too many questions. I can't think.*

R21: *I know this is good, but too many questions.*

R34: *Reduce the questions please...*

Students delivered their informative speech in Week 14 of the semester, and Competent Speaker Speech Evaluation Form (CSSEF) was used to measure their public speaking competencies. CSSEF measures eight public speaking competencies (Morreale et al., 2007). Results of two groups (N=34) were analyzed and Figure 5 illustrates students’ public speaking competencies. Generally, the findings reveal that most students were excellent in five competencies, while some of them perform satisfactorily.



**Figure 5.** Students' Performance Differentiating Between the Eight Competencies According to the CSSEF.

The results presented in this section have so far demonstrated that the application of the CSLM was able to assist students to evaluate the initial submission of the tasks, and resubmitted with an improved version of their tasks. The strategic utilization of the Critical Questioning and Creativity Check were able to help students to cognitively process their learning, and improve their performance and creative ability. By realizing their creativeness even in selecting topics for their public speaking have motivated most of the students to do better in the next task. This indicates that this creative strategy approach has been able to assist students realize their creative potential and enhance their public speaking competencies. The findings are similar to studies such as Duane and Satre (2014) and (McAllister and her colleagues, (2013) where the application of a creative strategy approach was able to help learners become better creatively, solve problem and improve their skills. This is also supported by Duggan's (2015) creative strategy where students would be able to produce more creative ideas that would help them to solve problem and innovate.

### ***5.2 Findings of the CSLM as applied in writing classes***

The CSLM was applied in writing classes focusing on 5-paragraph informative essay where students' learning was strategized in the five phases of the essay written task. The findings of the CSLM application in writing classes will focus on findings with regard to student motivation, and their performance in the written tasks. I will only briefly exemplify the application of the CSLM in one of the phases in the written task, i.e. topic selection. In the writing classes, students were given the general topic such as hobbies, my family and food, and they were requested to narrow down the general topic and choose a specific topic that they would like to write about.

**Table 2.** Application of the CSLM in the Topic Selection Phase by R10 and R15.

	Initial Task Submission	Task Resubmission
Topic Selection	Regular Exercise	Simple Healthy Activities for Students
Why do you choose this topic?	Students must exercise.	I am a student and I think students must exercise. I always jog at the lake and so other stuff. I think I can help tell my friends about exercise.
Creativity score	43%	78%
Topic Selection	Baking Cakes	The Great Things about Bread Making
Why do you choose this topic?	I love to bake. And I love to eat cakes and bread.	I love to bake. I baked cakes and bread before and they are very fun. It make me happy. I think I can write about this.
Creativity score	45%	80%

Table 2 shows how CSLM was able to help students improved selecting and narrowing down the topics. Even though the general themes provided were very simple and related to their everyday lives, the initial task submission reveals that some students were not able to produce a good topic for their writing. The CSLM hence was able to strategically guide them to pick a better and much interesting topic to write for their essay.

**Table 3.** Means and Standard Deviations to Compare the MSLQ Score between Control and Experimental Groups.

		Motivation Scale	Learning Strategies Scale
Experimental (N=27)	M	85.41	85.61
	SD	16.48	12.33
Control (N=25)	M	78.93	77.17
	SD	11.19	8.71

Table 3 shows the findings of the Motivated Strategies Learning Questionnaire (MSLQ) comparing between the experimental and control groups. MSLQ was administered at the end of the treatment period, and independent samples t-test was run to analyze the two sub-scales of the MSLQ: motivation and learning strategies. Table 3 presents the total score of the motivation and learning strategies of the MSLQ. The analysis shows that for both the motivation and learning strategies scales, there was a significant difference between experimental and control groups,  $p < .05$  (two-tailed). The results show that the experimental students' view of their motivation level and learning strategies used when CSLM was applied was higher than the control. This is a general indication of CSLM potential to motivate students to be involved in learning. This correlates with some studies which have applied strategic thinking and MSLQ (Jacobson & Harris, 2008; Osman & Kassim, 2015).

## 6. Conclusion

In brief, the findings discussed so far reveal that the CSLM has the potential to assist learners to improve their language proficiency and competency, and enhance creative abilities. However, the

strategy employed should be carefully selected and administered so that students' learning are effectively and creatively strategized.

The strategy of employing the Critical Questioning has shown that other than strategic thinking, CSLM also has the potential to develop other higher order thinking skills such as critical and analytical thinking. These skills are essential to help students at tertiary education, and especially for graduating students, as a preparation to enter the working world. The utilization of the Creativity Check has also indicated better learning performance and a boost for students to further develop their creative abilities. Therefore, the creative strategy discussed in this paper through the integration of strategic thinking and creative thinking taxonomies corresponds with the literature on creative strategy, strategic thinking and creative thinking. The application of creative strategy has the potential to assist students to construct knowledge (Runco, 2004), generate and produce new and creative ideas (Duggan, 2015), solve problem and innovate (Duane & Satre, 2014; Duggan, 2015; McAllister et al., 2013). The utilization of e-learning platforms such as Moodle and Edmodo also suggested that students have more opportunities to experience learning at their own pace, and at a time when they can best elicit their creative potential.

However, there is a need to look at how future studies can apply CSLM, and examine its effectiveness. One of the limitations of the CSLM is the time spent by teachers to give feedback and assess students' creative ability, and on the students' part, time spent to answer the questions and resubmit their work. Testing the model with mature students (public speaking course) compared to new students at the university (writing classes) indicated that mature will benefit this learning better than newly enrolled students. Yet again, the types of strategy employed might have affected this. And finally, since all studies thus far were conducted at one university, much still need to be done in order to determine the effectiveness of this learning model.

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