Unlocking Learners' Proficiency: Impact of the Modified One-Minute Paper Strategy on Self-Regulation and Student Perceptions in an English Course

ผลของการใช้การเขียนข้อความสะท้อนคิดเพื่อส่งเสริมความสามารถในการกำกับตนเองและความคิดเห็นต่อการใช้การเขียนข้อความสะท้อนคิดของผู้เรียนรายวิชาภาษาอังกฤษ

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Abstract

This study examined the effect of the modified One-Minute Paper (OMP), as a self-assessment tool, on language learners' self-regulation in learning as well as the extent to which it promoted their self-regulation. Moreover, the learners' opinions about the use of the modified OMP in their English course were also explored. Subjects in this study were 36 juniors and seniors with high and moderate levels of self-regulation who enrolled in an English course. Throughout the semester, they reflected on their learning by completing the modified OMP once a week. This study employed a mixed- method design. For quantitative data, the self-regulated trait questionnaires were administered twice. Descriptive statistics, namely mean, S.D., and the *t*-test were used to analyze the learners' improvement on self-regulation in learning. For qualitative data, in-depth interviews were conducted to elaborate the quantitative results and to investigate learner's opinions about the use of the modified OMP. The findings revealed that the modified OMP significantly developed self-regulation skills among students with a moderate level at the level of 0.05. Specifically, they became more behaviorally proactive in their learning processes, particularly in the sub-process of time management. For the opinions about the use of the modified OMP, most of the students were satisfied with the strategy since it enhanced their metacognitive skill, involving their ability to plan, monitor, evaluate, and re-plan, as well as their motivation in learning.

Keywords: one-minute paper, self-regulation, English learners, teaching methods, formative assessment

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บทคัดย่อ

การศึกษานี้มีจุดประสงค์เพื่อศึกษาว่าการใช้การเขียนข้อความสะท้อนคิด Modified One-Minute Paper (OMP) ซึ่งเป็นเครื่องมือหนึ่งในการประเมินตนเองมีผลต่อความสามารถในการกำกับตนเองของผู้เรียนหรือไม่ และหากมีผลต่อความสามารถในการกำกับตนเองของผู้เรียนจะสามารถช่วยได้มากน้อยเพียงใด นอกจากนี้ยังมีการสำรวจความคิดเห็นของผู้เรียนเกี่ยวกับการใช้การเขียนข้อความสะท้อนคิดร่วมกับการเรียนรายวิชาภาษาอังกฤษอีกด้วย ผู้เข้าร่วมงานวิจัยประกอบด้วยนักศึกษาชั้นปีที่ 3 และ 4 จำนวน 36 คน ที่ลงทะเบียนเรียนรายวิชาภาษาอังกฤษและมีความสามารถในการกำกับตนเองในระดับสูงและปานกลาง โดยนักศึกษาเหล่านี้ได้สะท้อนความคิดเกี่ยวกับการเรียนผ่านการตอบคำถามในการเขียนข้อความสะท้อนคิดสัปดาห์ละ 1 ครั้ง เป็นเวลาหนึ่งภาคการศึกษา การศึกษานี้ใช้วิธีการแบบผสมผสานซึ่งเก็บข้อมูลเชิงปริมาณโดยใช้แบบสอบถามเกี่ยวกับคุณลักษณะกำกับตนเอง 2 ครั้งแล้ววิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา ได้แก่ ค่าเฉลี่ย ค่าเบี่ยงเบนมาตรฐาน และแบบทดสอบ t-test เพื่อวิเคราะห์พัฒนาการด้านการกำกับตนเองของผู้เรียน สำหรับข้อมูลเชิงคุณภาพ ผู้วิจัยได้จากการสัมภาษณ์เชิงลึกเพื่อนำมาอธิบายผลเชิงปริมาณและเพื่อศึกษาความคิดเห็นของผู้เรียนเกี่ยวกับการใช้การเขียนข้อความสะท้อนคิด ผลการศึกษาพบว่าการเขียนข้อความสะท้อนคิดช่วยให้ผู้เรียนที่มีความสามารถในการกำกับตนเองในระดับกลางมีพัฒนาการที่ดีขึ้นอย่างมีนัยสำคัญที่ระดับ 0.05 โดยผู้เรียนกลุ่มนี้มีการพัฒนากระบวนการเรียนรู้ในส่วนของพฤติกรรมโดยเฉพาะอย่างยิ่งด้านการจัดการเวลา สำหรับด้านความคิดเห็นเกี่ยวกับการเขียนข้อความสะท้อนคิดผู้เรียนส่วนใหญ่รู้สึกพึงพอใจเนื่องจากเป็นเครื่องมือที่ช่วยยกระดับทักษะด้านอภิปัญญาซึ่งรวมไปถึง ความสามารถในการวางแผน กำกับ ประเมิน ปรับปรุงแผน และการสร้างแรงจูงใจในการเรียน

คำสำคัญ: การเขียนข้อความสะท้อนคิด การกำกับตนเอง ผู้เรียนภาษาอังกฤษ วิธีการสอน การประเมินความก้าวหน้า

Introduction

Self-regulation is crucial for EFL learners as it allows them to take charge of their language learning process, enabling them to set clear goals, organize their learning activities, and monitor their own progress (Zimmerman, 1990). Additionally, Oxford (2011) defines a self-regulated language learner as someone who actively takes part in learning, setting and controlling their learning goals, including their actions and beliefs.

To examine this more closely, Zimmerman (1990) stated that self-regulated learners need to be behaviorally, metacognitively, and motivationally proactive in their learning process. In their behavioral processes, they select, structure, and create environments that optimize their learning. Moreover, they themselves seek or create learning materials, set up study conditions and places where they are most likely to learn with little or no supervision. Self-instruction and self-reinforcement are involved during these processes. In their metacognition processes, self-regulated learners plan, set goals, organize, self-monitor, and self-evaluate their learning. In terms of motivational processes, students persistently show their perseverance in learning. They also have a high level of self-efficacy, signifying their belief in their ability to succeed. Furthermore, they experience intrinsic motivation, which is a type of motivation that originates from within an individual and is driven by personal interest and enjoyment in the learning process.

However, not every student possesses sufficient self-regulation, and those who lack self-regulation may face numerous challenges and experience hindered progress in their

language learning journey, resulting in limited motivation and engagement (Bembenutty, 2011). In addition, the absence of self-regulation may prevent students from effectively selecting and utilizing appropriate learning strategies, further hindering their language acquisition process (Zimmerman, 1990).

To address the challenge of students lacking self-regulation, it becomes crucial to recognize that self-reflection, a process enabling students to evaluate themselves and reflect on their learning experiences, stands at the core of self-regulation. It is also essential for educators to create opportunities for students to engage in it, as it can significantly improve students' performance (McDonald & Boud, 2003).

Additionally, Nicol and MacFarlane (2006) suggested that self-reflection and formative assessments can serve as beneficial tools in assisting students with their self-regulation. The cultivation of self-regulation can be effectively facilitated through the implementation of formative assessment (Bose & Rengel, 2009). Unlike traditional assessments that primarily focus on assigning grades, formative assessment is a classroom evaluation approach that prioritizes enhancing student learning (Yorke, 2003). Consequently, formative assessments which encourage students to engage in self-regulation were utilized in the study.

Various classroom assessment strategies can be employed to cultivate students' self-assessment abilities. One effective technique is the "One-Minute Paper" (OMP) introduced by Angelo and Cross (1993), which focuses on evaluating "what students have learned" rather than "what did I tell them". It aims to assess students' prior knowledge, recall, and comprehension of course-related concepts and skills. This method involves dedicating the last few minutes of a class session for students to provide concise answers to two questions provided on a card: "What was the most significant point discussed in today's class?" and "What unanswered questions or uncertainties do you still have?".

The OMP has gained popularity as the culture of assessment has expanded, and it is now utilized in various subjects such as economics, computer science, chemistry, medicine, psychology, and English literature (Brookfield, 2017). Furthermore, the OMP continues to serve as a learner-centered assessment tool in a wide range of educational contexts, including universities, for over 30 years (Greville-Giddings, 2021). It has not only been employed in traditional face-to-face classes but also in online classes for remote teaching (Campbell et al., 2019; Karlsson-Brown et al., 2020), as it promotes student participation and engagement in various classroom environments.

Thus, the OMP was chosen in this study to enhance students' self-regulation, given its manageability and practicality for both instructors and students, making it a valuable assessment tool. Most importantly, the OMP fosters learner reflection, nurturing self-regulatory skills by prompting critical thinking during the evaluation and monitoring of their learning progress.

In this study, an additional question was incorporated into the OMP: "What is your plan for improving your study or solving your problems for the next class?" This modification aims to encourage learners to become more proactive, fostering critical thinking after identifying the key content and the unclear points in the lesson. Moreover, this question plays a vital role in completing the cycle of self-regulated learning, which involves a series of interconnected phases as it stimulates students to develop a clear and actionable plan for the upcoming class. A popular model in self-regulated learning, the three-phase model of SRL by Zimmerman (2002), as presented in Zumbrunn et al. (2001), is in Figure 1.
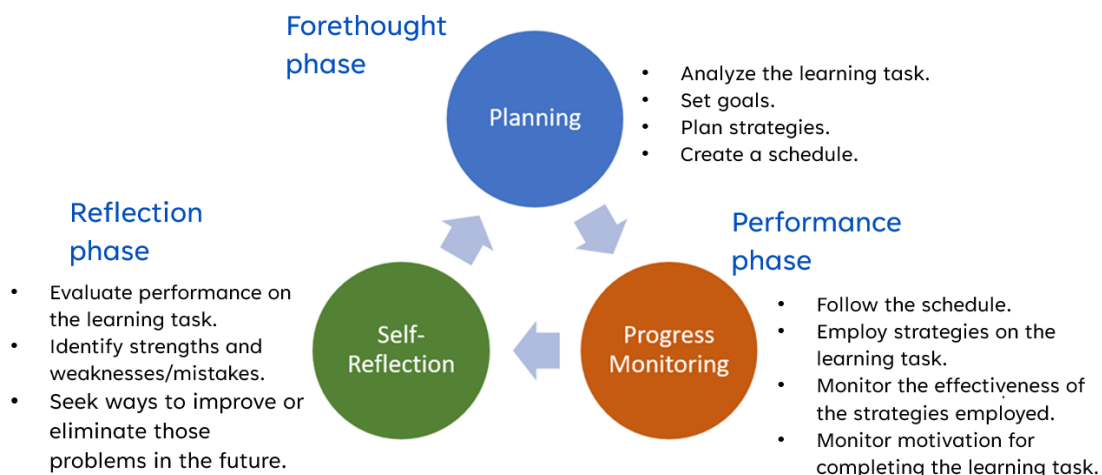
Figure 1 *The Cycle of Self-regulated Learning Model by Zimmerman, content supports by Zumbrunn et al. (2011)*

Figure 1 shows that in the forethought phase, students plan, set goals, and develop strategies. In the performance phase, they implement these strategies and monitor their effectiveness. The reflecting performance phase involves evaluating their performance on the learning task (Zimmerman, 2002; Zumbrunn et al., 2011). This cyclical process repeats as students engage in self-reflection, identifying strengths and weaknesses, and refining more appropriate strategies for future tasks (planning). They then follow their plan, adjusting to overcome any obstacles they encounter (progress monitoring).

Previous research has examined the use of the OMP in the classroom and the benefits it offers. For instance, the OMP has been widely utilized by instructors in higher education, providing valuable feedback and enhancing students' understanding of the lessons (Bryan et al., 1993; Harwood & Cohen 1999; Laici & Pentucci, 2021). Notably, the OMP presents advantages in terms of timesaving and facilitating students' retention of the taught content. It has been empirically demonstrated as an effective formative assessment tool that promotes self-regulation by enabling students to clarify their learning goals and receive timely feedback (Bose & Rengel, 2009). Additionally, the OMP has been successfully employed in many countries, with students perceiving it as learner-centered and helpful in bridging the gap between teaching and learning, connecting with students, and supporting their learning (Sahoo

& Taywade, 2021; Stevens, 2019), especially the EFL students who were unresponsive and hesitate to ask questions in class (Tsushima, 2015). This context resembles Thai classrooms. The one-minute paper is also a thinking-centered assessment tool, promoting greater reflection and deeper thinking in learning (Ashakiran & Deepthi, 2013). These studies underscore the significance of the OMP in fostering student engagement and self-assessment, which are closely related to self-regulated learning across diverse educational contexts.

Objectives

The specific objectives of this research were to study the effects of the modified OMP on language learners' self-regulation in learning and to explore the learners' opinions about the use of the modified OMP in their English course.

Research Questions

The research addressed two main research questions:
1. How does the modified OMP promote self-regulation in learning of the learners?
2. What are the learners' opinions about the use of the modified OMP in the English course?

Research Methodology

1. Context and Subjects of the Study

In this study, the subjects consisted of an intact group comprising 36 junior and senior students from various faculties at a Thai public university. These students were not majoring in English and had previously completed two Fundamental English courses. They were enrolled in an English elective course, which ranged from level B1 to B1+, and this course was taught by the researcher, who also took the role of the teacher. The study took place for approximately four months.

2. Research Instruments

2.1 The modified OMP form consisted of three questions. The first two questions were taken from Angelo and Cross (1993) to check whether the students could evaluate what they had learned and monitor themselves on how much they understood the lessons and which parts they still had difficulties with. The third question was added to investigate

how the students planned their future learning and how they coped with their difficulties. The questions are shown below:

1) What was the main point made in class this week?
2) What unanswered questions/unclear points do you
   still have?
3) What is your plan for improving your study or solving your problems in the next class?

The modified OMP was translated into Thai, which is the subjects' first language.

2.2 The pre- and post-questionnaires on self-regulation
traits translated into Thai were administered at the beginning and at the end of the semester to assess the changes in students' self-regulation traits before and after using the modified OMP in the English course.

In this study, the researcher adapted O'Neil and Herl's (1998) self-regulation trait (SRT) questionnaire based on Zimmerman's (1990) self-regulation model to measure learners' self-regulation traits. Originally addressing two self-regulation processes, it was expanded to encompass three: metacognition, motivation, and behavior.

The adapted questionnaire consists of 30 questions with six scales ranging from 1 (strongly disagree), to 2 (disagree), 3 (disagree somewhat), 4 (agree somewhat), 5 (agree), and 6 (strongly agree). The scale assesses three self-regulation processes: metacognition (including planning and self-monitoring), motivation (encompassing effort and self-efficacy), and behavior (involving study aids and time management). It was piloted with 40 students with similar backgrounds to the subjects in this study. This was done to evaluate its validity and comprehensibility for the target subjects.

Below are some sample questionnaire items for reference:

Table 1 *Sample Questionnaire Items*

Processes	Sub-processes	Sample questionnaire items
Metacognitive	Planning	I clearly plan my course of action before doing a task as well as intend to stick to my plan.
	Self-Checking	While doing a task, I ask myself, how well I am doing.
Motivational	Effort	I don't give up even if the task is not my favorite.
	Self-efficacy	I am confident that I can understand the basic concepts taught in this course.
Behavioral	Study aids	I know how to select learning materials that optimize my learning.
	Time management	I do not procrastinate on my study timetable. I always stick to it.

2.3 A set of semi-structured questions was used in the interview session to find out participants' opinions towards using the modified OMP. The interview questions consisted of three main parts. The first part was about learners' opinions on the modified OMP form. The second part was about their opinions on the advantages and disadvantages of using the modified OMP in the English course. The last part elicited other comments and suggestions about the use of the modified OMP.

Here are sample questions used in the interview:

1. What are advantages and disadvantages to you as a student of using the modified one-minute paper?
2. Do you like or dislike completing the modified OMP form? Why?
3. Please add any comments about the modified OMP that you would like to share.

The instruments mentioned in this study—namely, the modified OMP, the pre- and post-questionnaire, and a set of semi-structured questions for the interview—were assessed using the Index of Item Objective Congruence (IOC). The content and construct validity of these instruments were evaluated by three university lecturers, each with at least 15 years of experience in teaching English.

3. Research Procedure and Data Collection

The research procedure and data collection of this study proceeded as follows:

3.1 At the beginning of the semester, a pre-questionnaire was administered to measure the subjects' self-regulation traits prior to the modified OMP incorporated English course. The time allotted for completing the pre-questionnaire in the classroom was about 10-15 minutes.

3.2 The subjects were divided into groups according to their pre-questionnaire scores. The first group were students with the highest scores, 131-180. The second group were those with scores of 81-130. It should be noted that none of the students belonged to the last group which was for those whose scores were 30-80. The details are shown in Table 2.

Table 2 *Students' Scores on Self-regulation Traits*

Group	Students' pre-questionnaire scores	Number of students
High	131-180	21
Moderate	81-130	15
Low	30-80	0

3.3 The students were assigned to complete the modified OMP form in Thai weekly at the end of the class a total of 10 times over the 15-week semester, from the 2nd to the 6th week and the 9th to the 13th week.

3.4 In the 15th week, the students took a post-questionnaire on learner's self-regulation trait which was identical to the pre-questionnaire at the end of the class. Then the scores of the pre- and post-questionnaires were compared to check whether there was an improvement of their self-regulation skills.

3.5 Four students from each group, a total of eight students were purposively selected for an in-depth interview to examine the effect of the modified OMP on learners' self-regulation in learning as well as the changes in their learning behaviors. They were interviewed individually for about 15 minutes by the researcher. The interviews were recorded.

3.6 Another 10 students from each group, totaling 20, were randomly selected and individually interviewed by the researcher at the end of the course. These interviews occurred after the students completed the post-questionnaire, which gathered their opinions, suggestions, and additional comments about the modified OMP. The interviews were recorded.

4. Data Analysis

Data from the students were analyzed quantitatively and qualitatively as follows:

To answer the first research question which investigates how the modified OMP promotes students' self-regulation, descriptive statistics such as mean, S.D. and the t-test were employed to analyze the quantitative data. The average scores ($\bar{x}$) of pre- and post-questionnaires on the students' self-regulation traits were compared to check whether there was an improvement in self-regulation in learning after completing the modified OMP. The average scores of each sub-process: planning, self-checking, effort, self-efficacy, study aids, and time management from pre- and post-questionnaires were compared to check the extent that the modified OMP promotes self-regulation in learning.

To gain additional understanding and insight, in-depth interviews were performed to collect qualitative data. After that, a content analysis was conducted. The recorded information gathered from the interviews was transcribed. Then the transcripts were deductively analyzed. Therefore, the students' answers were codified and matched with the categories of the specific processes involved in the self-regulation development. The results gathered from both quantitative and qualitative analysis were compared to understand what happened behind the statistical data as well as verify or disconfirm the statistical results.

To answer the second research question investigating the learners' opinions about the use of the modified OMP, 20 students were randomly selected and individually interviewed by the researcher at the end of the course—after they completed the post-questionnaire. A set of pre-determined questions were asked in this session.

Findings

The following sections report the effects of the modified OMP on language learners' self-regulation in learning and learners' opinions about the use of the modified OMP in the English course.

1. The Effects of the Modified OMP on Language Learners' Self-Regulation in Learning

After the subjects completed the modified OMP once a week, a total of 10 times during the semester, on the 15th week, they took the post-questionnaire on learners' self-regulation traits. The scores on the pre- and post-questionnaires of the high and moderate groups were compared to see the differences and to check the improvement of their self-regulation skills. In addition, the scores of each group were analyzed to see their improvement in the three processes as well as the sub-processes of self-regulation traits.

Quantitative and qualitative data analysis were used in this study. The quantitative data analysis involved the comparisons of the students' self-regulated scores.

Table 3 compares the high and moderate groups' scores on their self-regulation traits as measured by the pre- and post-questionnaires.

Table 3 *Comparison of Students' Scores on Self-Regulation Traits*

Group	Questionnaire	N	$\bar{X}$	SD	t	Sig.
High	Pre	21	4.70	.24	.310	.760
	Post		4.68	.43		
Moderate	Pre	15	3.87	.33	-2.691	.018*
	Post		4.00	.36		

The results presented in Table 3 indicate that there were insignificant slight differences between the high group's scores on self-regulation skills before and after using the modified OMP. However, the pre- and post- questionnaire scores of the moderate group were significantly different at the statistical level of 0.05. As a result, the score on self-regulation traits of the moderate group was further analyzed to shed more light on the results of this study.

The scores of the moderate group on metacognitive, motivational, and behavioral processes were compared to assess the impact of the modified OMP on self-regulation. The results are presented in Table 4

Table 4 *Moderate Group's Scores on Three Processes of Self-Regulation*

Processes	Questionnaire	x̄	S.D.	t	Sig.
Metacognitive processes	Pre	4.06	.44	-3.71	.716
	Post	4.10	.36		
Motivational processes	Pre	4.13	.48	.276	.787
	Post	4.09	.56		
Behavioral processes	Pre	3.57	.40	-3.944	.001*
	Post	3.77	.41		

Table 4 shows that before and after using the modified OMP, the moderate group's self-regulation scores on metacognitive processes and motivational processes were not significantly different, but those on behavioral processes were significantly different at the statistical level of 0.05. The subjects in this group gained higher scores on behavioral processes; their scores increased from 3.57 to 3.77 at the end of the study.

Since it was in the behavioral processes of self-regulation in learning that the moderate group had shown their improvement after the use of the modified OMP, Table 5 describes the comparison of the moderate group's scores on sub-processes of self-regulation in their learning before and after the use of the modified OMP to further find out the exact area of differences in their behavioral processes. In sum, their scores on all sub-processes of self-regulation in learning are presented.

Table 5 *Moderate Group's Scores on Sub-Processes of Self-Regulation*

Processes	Sub-processes	Questionnaire	x̄	S.D.	t	Sig.
Metacognitive processes	Planning	Pre	4.20	.39	-.430	.674
		Post	4.25	.34		
	Self-checking	Pre	3.92	.53	.206	.840
		Post	3.95	.55		
Motivational processes	Effort	Pre	4.13	.48	.276	.787
		Post	4.09	.59		
	Self-efficacy	Pre	4.13	.48	.276	.787
		Post	4.09	.59		
Behavioral processes	Study-aids	Pre	3.57	.52	-1.361	.195
		Post	3.72	.57		
	Time management	Pre	3.56	.52	-2.149	.050*
		Post	3.81	.50		

Table 5 shows that even though the pre- and post-questionnaire scores on self-regulated traits of the moderate group were significantly different, only one sub-process of the behavioral processes, namely time management yielded a significant difference. The moderate group's scores on time management in the pre- and post-questionnaires were significantly different at the statistical level of 0.05; their scores increased from 3.56 to 3.81.

Thus, in terms of quantitative analysis, it could be interpreted that the modified OMP helped promote self-regulation skills, especially the ability of time management, which is a

sub-process of behavioral processes, in students whose initial self-regulation scores were at the moderate level.

In addition, to qualitatively investigate the effects of the modified OMP on language learners' self-regulation in learning, eight students, four from the high group and four from the moderate group were interviewed individually by the researcher.

From the interview, the high group's reflection on the modified OMP revealed positive outcomes in their learning self-regulation. They improved their planning by setting goals based on weekly reflections, checked their understanding regularly, and put in extra effort to address areas of difficulty. This resulted in increased self-efficacy and motivation. They effectively utilized study aids and managed their time well, leading to better exam preparation and a balanced approach to learning as Student A said,

> *"When I didn't understand the main point of the lessons, I didn't wait for long to figure out my problems. I continuously checked my learning progress every week. So, I didn't have to cram for the exam, and I did well on my big days."*

Moreover, a student revealed that she concentrated more both in class and outside class, as mentioned by Student C regarding the change in motivation for learning. She stated,

> *"I paid more attention in class because if I hadn't, I might not have known what to write down on the modified OMP form.*

Similarly, the reflection of the moderate group on the modified OMP yielded positive outcomes in their self-regulated learning. For instance, Student E and Student F showed improved metacognitive processes by consistently planning and setting goals. As Student E explained,

> *"I didn't have enough vocabulary to comprehend the readings, so my goal was learning 10 unknown words every day from reading any kinds of materials".*

Students in the moderate group reported increased concentration in class and utilized additional learning sources. Completing the modified OMP helped boost their self-confidence and aided in exam preparation. They utilized study aids and managed their time more effectively, leading to improved self-discipline as Student G said,

> *"I've changed my learning behavior. I felt I could develop my self-discipline because I could stick to my revision schedule. I was so proud of myself when I accomplished my goal".*

Based on the above results, it can be concluded that although the statistical data indicated that the modified OMP could significantly promote students in the moderate group's time management skill, which is the sub-process of behavioral processes, the data gathered from the in-depth interviews from both groups indicated that the modified OMP may have positively impacted various aspects of their self-regulation, although not in a statistically significant manner."

2. Learners' Opinions About the Use of the Modified OMP in the English Course

The findings from the research on learners' opinions about the use of the modified OMP in the English course can be discussed as follows:

a. Opinions on the Modified OMP Form: Content, Frequency of Use, and Pattern of

    Use

All students found the questions in the modified OMP form to be appropriate for reflecting on their learning. However, a couple of students suggested adding a question related to tracking their progress in following their plans. Ninety-five percent of them agreed that completing the form once a week was appropriate, while five percent suggested doing so every two weeks.

b. Advantages, Disadvantages, and Satisfaction of Using the Modified OMP

Ninety percent of students expressed satisfaction with the modified OMP, highlighting its benefits. It helped them evaluate their understanding, changed their learning behaviors, and increased their responsibility towards their own learning. The modified OMP also motivated them to seek additional resources and improved their recall and organization of information. Students appreciated the opportunity to communicate with teachers regarding unclear points.

However, ten percent of students felt that the modified OMP did not significantly assist them in becoming more self-regulated learners as they did not derive maximum benefits from its usage.

c. Other Comments and Suggestions

Students recommended implementing the modified OMP prior to their final academic year for more effective time management. Additionally, they recommended applying the modified OMP to other subjects, especially those with complex content, to enhance their learning.

In conclusion, the findings revealed that most students had positive opinions about the modified OMP in the English course. They acknowledged its advantages, including improved metacognition, motivation, responsibility, and organization of information. However, ten percent of them faced challenges and preferred assistance from teachers and peers. The study also highlighted the importance of introducing the modified OMP early and considering individual circumstances to optimize its effectiveness. Furthermore, the students' suggestions emphasized the potential for broader application of the modified OMP across various subjects.

Discussion

Based on the findings of this study, the modified OMP could serve as a versatile self-assessment and formative assessment. It not only facilitates student engagement and self-evaluation but also supports the cultivation of deeper thinking during the learning process, as previous studies have demonstrated.

Although there were no significant differences in the self-regulated trait scores of the high group, as revealed by the quantitative data, it is likely that these qualities were present at high levels since the beginning of the study. Students who were in the moderate group, on the other hand, significantly improved their scores, showing some improvement in the domain of behavioral processes. This may be because students in this group had more room for development than those in the high group. Simply put, there was a gap that needed to be filled up for students with initial moderate scores on self-regulation qualities, indicating that they still have potential to progress.

However, upon conducting content analysis from information gathered from in-depth interviews, the results indicated that the students from both groups were at least slightly more proactive in their learning, though the statistically significant difference could not be established.

The following sections will provide a detailed discussion of these results.

Firstly, in terms of motivational processes, the data gathered from in-depth interviews of both groups showed that their motivation in learning English at the end of the semester seemed higher.

In addition, the fact that students learned to create their plans with a purposeful goal was a good sign of self-regulation development. This was advantageous for them because most of them were able to create and follow their own learning plans that optimized their learning. This sense of goal achievement boosted their self-efficacy, which is a part of motivational processes. As a result, their motivation in learning gradually increased throughout the semester. This was beneficial, as indicated by Pintrich and De Groot (1990) and Turan and Demirel (2010), who stated that positive motivation supports a higher level of self-regulated learning.

The information presented above demonstrates how the modified OMP explicitly encouraged students to engage in ongoing self-reflection throughout the semester. As noted by Katz and Sugden (2013), providing students with opportunities to engage in academic activities is crucial for fostering students' motivation and self-efficacy in learning. Additionally, Bose and Rengel (2009) asserted that self-reflection is the core of self-regulation. Therefore, the modified OMP represented a radical approach to help students enhance their self-regulation skill, particularly in the motivational processes.

Secondly, in terms of metacognitive processes which involve the learners' ability to plan, set goals, self-monitor, and evaluate their learning (Zimmerman, 1990), the data from both groups showed some evidence proving that the modified OMP could promote their self-regulation in this process. The students from both groups monitored and evaluated their learning while they were attending classes. Finally, they ended up with meaningful learning plans and goals.

From an analytical standpoint, the modified OMP probably facilitates the gradual development of their self-regulated learning, especially in the metacognitive processes. This is because each question in the modified OMP employed in this study was designed to

systematically enhance students' development of self-regulated skills. Noticeably, the first two questions in the modified OMP effectively prompted the students to engage in monitoring and reflecting on their learning progress, allowing them to assess their comprehension and identify any areas of uncertainty, explicitly promoted metacognitive processes of self-regulation.

Additionally, the last question in the modified OMP, asking about their study plan served as a catalyst for the students to complete the cycle of self-regulation development. It enabled them to formulate a plan of action aimed at solving problems and enhancing their study habits.

Finally, the information obtained from the interviews indicated that both groups of students had shown improvements in their behavioral processes although it was statistically significant only for the moderate group. This is because the key point is that students in high groups revealed that they spent their free time outside of class more productively and improved their self-discipline in learning, providing evidence of improved time management skills. This observation strongly supports their improvement in time management, as Macan (1994) defined time management behaviors to include goal setting, task prioritization, organization, and scheduling.

Based on the above discussion, it can be summarized that the modified OMP was well-received by the students. In addition, using the modified OMP as a weekly assessment tool facilitated self-reflection and improved self-regulated learning skills. Students exhibited proactive learning traits, characterized by effective forethought and performance phase processes. They created concise, practical study plans and goals based on self-analysis, in contrast to reactive learners who rely on vague methods (Zimmerman, 2013). With clear goals and plans, students focused on their learning and self-regulated their performance. They self-evaluated, identified weaknesses, and adjusted strategies, aligning with the cyclical model of SRL. These processes occurred consistently through the use of the modified OMP, designed to encompass all three phases of self-regulated learning.

It is also worth emphasizing that the modified OMP helped students with an initial moderate level of self-regulation show significant improvements in their behavioral processes related to self-regulation in learning, the abilities to select, structure, and create an environment that optimizes their learning as well as engage in self-instruction during acquisition and self-reinforcement during performance enactments (Diaz & Neal, 1990; Zimmerman, 1990). Notably, they developed enhanced time management skills, a factor with the potential to positively influence self-efficacy and academic achievements (Karim & Mitra, 2011; Nasrullah & Khan, 2015). While this study primarily focused on enhancing students' self-regulation in learning and did not explicitly investigate the impact on academic achievements, it is reasonable to infer that such improvements could yield benefits in that domain as well.

Conclusion and Implications

The study suggested that the modified OMP was likely an effective assessment tool for promoting self-reflection, a vital aspect of self-regulation (Pintrich, 2000; Zimmerman, 2002). Regular use of the modified OMP enhanced students' self-regulation skills, with significant

impacts observed among those with moderate self-regulation levels, particularly in terms of increased behavioral proactivity, notably in time management. However, high-level self-regulation students did not experience substantial improvements, likely due to their already elevated baseline levels.

Regarding student feedback on the modified OMP, students from both groups expressed satisfaction and identified several benefits, including enhanced metacognitive skills, increased responsibility for learning, improved time management, heightened motivation, and improved memory retention. Additionally, it facilitated communication with teachers. However, the modified OMP may not be suitable for all students, especially those with limited English proficiency, who may prefer support from teachers and peers over self-regulation.

The limitations of the study include its focus on junior and senior students with existing self-regulation levels, limiting its generalizability to students with lower self-regulation levels. Further research should explore the effects of the modified OMP on diverse learner profiles.

Based on the results, the modified OMP could be beneficial in enhancing students' regulation in language learning, particularly for students with a moderate level of self-regulation. However, there are some points that teachers need to consider, and several pedagogical recommendations can be made.

Firstly, teachers should focus not only on teaching content but also on developing students' metacognitive skills, especially during the early stages of their university experience. By providing guidance on self-regulation and independent learning, teachers can help students accurately assess their weaknesses and select the most appropriate approaches for their learning tasks. This includes helping them understand their learning styles and preferences as well as guiding them in creating personalized learning plans.

Secondly, students' prior knowledge is crucial for developing independent learners who can regulate themselves and learn independently. Evidently, students lacking sufficient basic knowledge are likely to encounter difficulties when attempting to solve problems on their own. Certain students may struggle to connect with new content, viewing self-studying as a time-wasting activity. Although searching for assistance from peers or teachers is one of the self-regulated learning strategies (Zimmerman, 2008), students at a higher level of education tend to do more complex tasks, and inevitably need to deal with obstacles by themselves. Thus, it is essential for teachers to observe and help students to overcome this problem so that they can have an accurate and adequate background to study on their own. When they can connect their accurate and relevant prior knowledge with the new knowledge, they will be able to learn and retain more (Ambrose et al., 2010; Dong et al., 2020; National Research Council, 2000; Vygotsky, 1978).

Finally, according to Ambrose et al. (2010), students need to learn how to analyze the demands of assignments, assess their own knowledge and skills, plan their approach, check their progress, and change their strategies as necessary if they want to become self-directed learners. Accordingly, to help students adjust their learning strategies, teachers might add some activities providing chances for students to report what and how well they did after they had

set their goals and created their plans. It can be a chance to check whether they could reach their goals or not. If not, it would be a good opportunity for the teacher to investigate the causes of problems, find solutions and advise them on how to learn more effectively as well as scaffold their learning progress as needed.

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