Implementing E-Portfolio in Self-Monitoring Phase of Self-Regulated Learning Strategy in Writing Course: A Case Study

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Abstract

This study proposes a model of self-monitoring phase of Self-Regulated Learning using E-Portfolio in writing an essay. The method used was case study which aims to take an activity or phenomenon as an example. The E-Portfolio tool used was Wordpress.com. The proposed model covers ten stages begin with students making the E-Portfolio, stating their goals, taking notes exploring materials, taking notes on feedback given by the lecturer and peers, reviewing the feedback, performing self-evaluation, presenting the results of evaluation, discussing with peers about their difficulties, and asking and discussing with the lecturer about personal difficulties found during the process. To achieve the desired result from implementing E-Portfolio in Self-Monitoring phase of SRL, teacher/lecturer should consider several factors among others learning objective, participants, tool used, the outcome expected, and not to mention infrastructure available. Several challenges in implementing this strategy include the infrastructure such as internet connection and the hardware supports. In addition, students' reluctancy to do the self-reflection phase due to self-distrust with their capability and skill or their skepticism towards the teacher/lecturer should be overcome with adequate guidance and frequent encouragement for the success of this strategy.

Keywords: Case Study, E-Portfolio, English Language Teaching, Self-monitoring phase, Self-Regulated Learning

INTRODUCTION

Technology penetration in higher school education has been widely used not only for administrative purposes but also for academic purposes. Technology is also used to facilitates both students and teachers from the preparation, delivery, and assessment in the teaching and learning process. Electronic portfolio or E-Portfolio is one of the technologies that has long been used in teaching and learning strategy even before the Covid-19 outbreak (Ali et al., 2024). This study aims to capture the implementation of E-Portfolio in Self-Regulated learning strategy at the higher education.

Self-regulated learning as a learning strategy aims to give support to learning activities conducted by teachers/lecturers so students can learn independently. As what proposed by Lee et al. (2019), self-regulated learning is a learning strategy focusing on motivating students to be active to develop their skill in setting their individual learning goals, monitoring their personal process, regulating individual learning process, controlling their understanding, motivation, behavior by

considering their goals and the influences from the environment.

The phases of SRL, based on Zimmerman (2000), are divided into 3; Forethought and planning, performance monitoring, and reflections on performance. In the Forethought and planning phase, students work on analyzing the tasks given and setting goals specifically to complete it. During the Performance Monitoring phase, students are demanded to employ strategies to help them make progress on learning and preview the success of the strategies and personal motivation for completing the task based on the goals they had planned before. In the Reflection on Performance phase, students are evaluating their individual performances based on the effectiveness of learning strategy chosen.

E-Portfolio in academic field can be defined as a means of collecting evidences of learning or a demonstration of learning ways, exploration, experiences and achievements through something that trackable and visible. The fundamental aim of such an E-Portfolio is to improve students' learning through the processes of self-reflection of their own learning and interaction with others (Vec et al., 2015). In short, it is a collection of students' course-related works which are stored digitally (ePortfolios Explained: Theory and Practice. Centre for Teaching Excellence, University of Waterloo). However, (Walland & Shaw, 2022) further explain that e-portfolio functions not merely collecting students' works but instead attempting to present key points of the learning process.

A study by (Misdi, 2020) conducted during Covid-19 outbreak using Edmodo Learning Management System based E-Portfolio. The self-monitoring process includes:

1) Making Edmodo LMS based E-Portfolio as their individual learning journal,

2) Stating their individual learning goals of making strong argumentative writing in Edmodo,

3) Taking notes on the Edmodo of the process of exploring materials related to their topics of essay,

4) Taking notes on the Edmodo of the first feedback given by the lecturer and peers related to their progress in essay writing,

5) Taking notes on the Edmodo of the second feedback given by their lecturer and peers in the issues of grammar and writing style,

6) Reviewing the feedback given shown by improvement on their essays,

7) Performing self-evaluation on the progress of their essay writing,

8) Presenting the results of evaluation on the e-portfolios,

9) Discussing with peers about their difficulties in writing.

At the end of the study students are able to provide strong arguments with credible resources for their writing tasks.

The benefit of using technology for self-regulated learning have also been mentioned by (Chou & Zou, 2020) in which they design an intelligent computer assisted learning system, called Open Learner Models for Self-Regulated Learning (OLM-SRL) where in the stage of implementation and monitoring strategy

1) Student goal-setting for setting the wanted academic performances on OLM-SRL,

2) Student review learning after class on OLM-SRL,

3) Students observe their self-assessment by reviewing the feedbacks given via OLM-SRL,

4) Students pursue the assessment system for assessing actual results based on their performances based on feedbacks given by OLM-SRL,

5) Students changed their learning strategies after reflecting on perceived outcome performance.

The finding shows that OLM-SRL have helped students to obtain maximum result in SRL.

Chalk & Wire E-Portfolio was implemented by (Campbell & Tran, 2021) to leverage students' learning success. The self-monitoring phase was completed within ten weeks in which students are asked to post at least eight journals to be discussed. The phase for each week covers:

1) Making e-portfolio at Chalk & Wire as their individual learning journal,
2) Posting a journal summary on Chalk & Wire weekly,
3) Taking notes on Chalk & Wire of the feedbacks given by their peers for each post,
4) Giving responses on Chalk & Wire of the questions given by their peers for each post,
5) Reviewing the feedbacks given shown by improvement on their weekly summary,
6) Performing self-evaluation on the progress of their weekly summary,
7) Presenting the results of evaluation through improvement of their weekly post.

Vesna Gros in (Vec et al., 2015) used Mahara based E-Portfolio with the monitoring phase as follows:

1) Students complete the learning journal in Mahara,
2) Students fill in the reading comprehension tasks and review them,
3) Students practice to apply reading strategies,
4) Students read books from the list provided,
5) Students participate in the reading competition,
6) Students review their achievements,

7) Students create ads and blogs for the chosen book.

This cycle has encouraged a Grade 6 students in their Reading activities. It may be because the product resulted is considered as fun and suitable for target students.

Mahara was also used by Petra Mikeln in (Vec et al., 2015) for self-reflection in book review task for Grade 9 students. The cycle of the monitoring process covers:

1) Filling out questionnaire related to their habits on reading activities,
2) Creating a meme showing their perceptions on reading,
3) Participating in determining acceptable criteria for a book review,
4) Making their learning plans,
5) Choosing an English book, with minimum 40 pages, to read,
6) Completing a reading-journal,
7) Writing a review about the book they have read,
8) Making a new book cover for the book and creating their own page providing review about the book,
9) Completing a questionnaire, talking about and assessing their performances.

At the end of the cycle, most of the students have finished reading at least one book since they liked and chose the books themselves. The students also show excitement especially in creating meme and book cover.

The purpose of this study is describing how e-portfolio is used in the classroom during learning activities to help students monitor their individual progress during the process of building learning independence.

The novelty proposed by this study is the use of e-portfolio as a digital media which is considered relatable to students in this era. The integration of the media with self-regulated strategy especially in performance-monitoring phase shows the importance of this ability for students.

There 2 research questions in this study;

1) What learning activities completed by the students in the phase of Performance-monitoring of Self-regulated learning strategy?
2) How is e-portfolios implemented to support the goals of Performance-monitoring phase of the students?

METHODOLOGY

It is a case study aims to take an activity or phenomenon as an example. As (Yin, 2014) mentioned, case study explains the cause-effect relation of real life and interventions, describes the intervention, and explores the condition where the intervention causes unclear outputs. Case study is mentioned by (Morgan et al., 2017) as related to the case observed or and is important to understand any cases in the real world.

The study took place at a fourth semester class of Essay-Writing class at a private university in Semarang. It involved 15 students as the respondents selected with purposive sampling technique. As mentioned by (Cohen et al., 2017), purposive sampling accommodates researcher's satisfaction in terms of fulfilling the needs of the research. The samples are selected for a specific purpose which was the students' involvement in the course and their participations in completing e-portfolios.

The instruments used in this study were e-portfolios as the learning media and observation sheets to track the learning activities conducted in the classroom especially the ones involving e-portfolios.

The data gathered in observation sheets were then analyzed using thematic analysis by categorizing the learning activities to 3 phases according to Self-regulated learning strategy; Forethought and Planning phase, Monitoring Performance phase, and Reflection Performance phase. The data were then focused on the second phase; Performance Monitoring phase. The learning activities conducted in this phase were then specified to the ones implementing e-portfolios. As what conducted by (Dawadi, 2021), thematic analysis is employed to organize and analyze complex data in more systematic ways. It catches the narratives data involved and produces insightful perspectives. This analysis is considered supporting and accommodating the present study in terms of data analysis.

This present study was conducted with these procedures; 1) The researcher contacted the lecturer for further administration needs, 2) The researcher attended the class as an observer and took note on the learning activities conducted by the lecturer in the classroom.

FINDINGS AND DISCUSSION

Learning Activities in Performance-Monitoring phase

Based on the observation, during the Essay Writing Course, the students completing some activities reflecting the goals of Performance-monitoring characteristics;

1) Making e-portfolio as their individual learning journal,
2) Stating their individual learning goals in the e-portfolios,
3) Taking notes on the e-portfolios of the process of exploring materials related to their topics of essay,
4) Taking notes on the e-portfolios of the feedback given by the lecturer related to their progress in essay writing,
5) Taking notes on the e-portfolios of the feedback given by their peers in the process of essay development,
6) Reviewing the feedback given shown by improvement on their essays,
7) Performing self-evaluation on the progress of their essay writing,
8) Presenting the results of evaluation on the e-portfolios,
9) Discussing with peers about their difficulties in writing,
10) Asking and discussing with the lecturer about personal difficulties found during the process of writing the essay.

The Use of E-Portfolios to develop the Performance-Monitoring Skill

The e-portfolios used in the classroom was the ones developed in wordpress.com.

Their personal blog was involved in the learning activities, especially, the ones categorized into Performance-Monitoring phase of Self-regulated learning strategy.

Table 1. Learning Activities

Planning activities	Self-Monitoring activities	Self-Reflection activities
• Discussing learning objectives with lecturers	• Making learning journal	• Reviewing feedback
• Learning from models/examples provided by lecturers	• Completing the learning journal with learning goals	• Planning next activities
• Setting goals guided by lecturers	• Presenting learning journal	
• Plan learning activities guided by lecturers	• Working with groups	
	• Discussing learning progress	
	• Getting feedback from lecturers	
	• Reviewing utilized learning strategies	

From the learning activities presented above, the students used e-portfolios to record their learning plans, learning process, and evaluation.

As the first step, after the process of signing-up at the wordpress.com, students were asked to publish their plans related to how they want to produce their essays in terms of what and when they want to complete the activities.
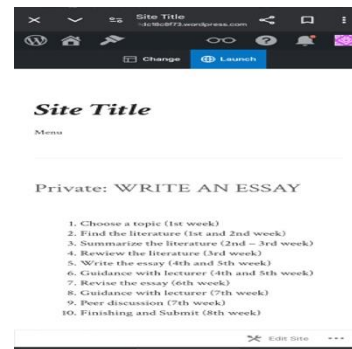

Figure 1. E-portfolios to write learning plans

By publishing the learning plans in the e-portfolios, the lecturer can visit the sites and evaluate whether the plans are reasonable or not. This also allows other students to learn from their peers related to the steps or process. A student may find that their peer's plans are somewhat better and more organized and revise some aspects in their own plans.

The next thing students did was reporting their process of learning. In this sample, a student presented the materials that she had explored before writing an essay to support the topic that she has chosen. This post of e-portfolio shows that she chose to write an essay about the pros and cons of being athletes in Indonesia. She visited some news sites of Indonesia and others of other countries to find the contrast of being athletes in Indonesia and other countries. By publishing these activities, students were expected to follow the process of writing an essay which include exploration of data to support their ideas instead of writing only based on their perspectives.

The next activity completed by the student was showing the summarizes of the literature they have gained from various sources. Publishing their summaries in the e-portfolios helped them to be on track since the lecturer was also able to see whether the summaries of ideas gained from the sources were related and relevant to the concept of the topic they wanted to write. Some feedback from the

lecturer were given in this process when there were irrelevant data from the sources.

By reviewing their plans and conducting the process of essay-writing based on their plans, students could focus more on the process of producing an essay that is scientific. The next step presented in the sample below is publishing their review on the literature based on their summaries. This review will help them find the foundation of the scientific aspect of their essay. By publishing this review, students were expected to be more responsible in writing the essay and find the points they want to present in their essay to support their ideas.

The next step completed by the students was building their essays. The essay was also completed in the e-portfolio sites. It helped other students and the lecturer review the essay when needed especially when the students need some feedback either from peers or from lecturer.

The comment section in the e-portfolios allowed the peers and the lecturer to give feedback to the writers to help them improve the quality of their writings.

By having the e-portfolio in one place started from the initial steps to the final ones, it gave more opportunities for students to monitor their development and improvement efficiently.

The Advantages of E-Portfolio

The benefit of using E-Portfolio for self-reflection have been studied by many researchers. The evidence also showed that the utilization of E-Portfolio for self-regulated learning has proven to improve the academic achievements of students.

A comprehensive literature review by (Lu, 2021) conclude that E-Portfolio has a significant benefit in as a product and a process. A product means E-Portfolio plays as a showcase tool for documenting and showing student's learning progress, learning skills, learning competencies, and learning experiences, as well as learning achievements from time to time. As a learning process, students are expected to experience the processes of planning, synthesizing, presenting, discussing, and reflecting to generate the best outcome. Similarly, Slepcevic-Zach & Stock (2018) underline the importance of E-Portfolio as a tool for reflection and self-reflection. This study conclude that E-Portfolio helps the majority of respondents to discover for themselves previously unknown competences. More than half of the respondents (55.4%) also eager for further developing their E-Portfolios even after graduation. Research by Muin et al. (2021) assert that E-Portfolio gives advantages in assessing language competencies. It assists to improve the writing skills of the students and develop the teachers' role through feedbacks and evaluation. They utilized Google Classroom based E-Portfolio as a medium of collecting students' artefacts and reflecting them. The majority of the students agree that the E-Portfolio is an effective tool in learning process.

Factors To Consider in Self-Monitoring Phase of SRL Using E-Portfolio

By looking at the advantages of using E-Portfolio, this study adopts appropriate stages in self-monitoring phase of SRL in E-Portfolio with a slight modification. Stages of Self-Monitoring phase of Self-Regulated Learning using E-Portfolio are indeed elastic depends on the learning objective, participants, tool used, the outcome expected, and not to mention infrastructure available. One highlighted similarity is this phase requires intense attention both from lecture/teacher and student to apprehend the follow ups given in the E-Portfolio. Teacher's role at this phase is significantly pivotal to encourage students completing the assignments, evaluating the assignments, encouraging peer review process, and at then ensuring the outcome meet the learning

objective. The importance of teacher/lecturer's role is also reflected in the finding of this study which is in line which previous studies like Campbell & Tran (2021); Misdi (2020); Vec et al. (2015), except Chou & Zou (2020) who design a computer assisted learning system, called Open Learner Models for Self-Regulated Learning (OLM-SRL) for giving feedbacks instead of the lecturer.

The participants and learning outcome may also influence the teacher/lecturer in considering stages at the Self-Monitoring phase. The finding reflects that for higher school students, a more complex assignment and critical thinking-required outcome can be applied which accords to previous studies (Campbell & Tran, 2021; Chou & Zou, 2020; Misdi, 2020). Meanwhile, teacher may consider a more creative and fun outcome for the lower degree students as exemplified by Vesna Gros and Petra Mikeln (Vec et al., 2015). However, it cannot be said that the lower degree students require a simple instruction, indeed, what required is a more detailed instruction and language that they easily understood.

The E-Portfolio tool used should be carefully considered by the teacher/lecturer. Here at least five tools have been mentioned including Edmodo, Google Classroom, Chalk & Wire, Mahara, OLM-SRL, and in this study is Wordpress.com. Before selecting the appropriate tool, it is better to consider at least the participants and infrastructure other than the learning objective. A previously unknown tool is not impossible to be applied as long as initially the students have been introduced and trained to use the tool until they are capable of utilizing it.

Challenges in Self-Monitoring Phase of SRL Using E-Portfolio

Several challenges need to be encountered especially by teacher/lecturer in implementing the Self-Monitoring Phase of SRL using E-Portfolio. Regarding the tool used, Walland & Shaw (2022) have noted several challenges among others; first and foremost is the technological aspect. Ideally, the access to fast and stable internet connections both at home and school are required as well as reliable devices. The second aspect needed is the digital literacy. Teacher/lecturer has to ensure themselves that they are literate enough to use the selected E-Portfolio tool since it cannot be argued that their students have better knowledge and understanding in using 21st century technology.

In addition, Ali et al. (2024) underline that the age of students, which influence the level of motivation and maturity of students, may influence the implementation of E-Portfolio in terms of developing the Self-Regulated Learning. They may reluctant in giving feedbacks or revising the assignment based on the feedbacks. Thus, teacher/lecturer should consider whether or not E-Portfolio is appropriate to be applied in his/her classroom. The reluctancy of students in doing the self-reflection via E-Portfolio can also be influenced by their self-distrust about their skill and capabilities in completing the stages. Not to mention, their skepticism towards the teacher/lecturer as they feel that their teacher does not provide adequate guidance and encouragement regarding reflection. Therefore, frequent explanation and encouragement are important for students to understand the importance of self-monitoring phase of SRL in E-Portfolio for them to achieve the desired learning outcome.

CONCLUSION

Self-Monitoring is a crucial phase in Self-Regulated Learning strategy. This phase requires complex preparation and intense attention during the process. The complexity even more complicated when using E-Portfolio as the tool. This study outline ten stages of self-monitoring phase of SRL using Wordpress.com based E-Portfolio that can be

adopted by lecture at the higher education level. The stages begin with students making the E-Portfolio, stating their goals, taking notes exploring materials, taking notes on feedback given by the lecturer and peers, reviewing the feedback, performing self-evaluation, presenting the results of evaluation, discussing with peers about their difficulties, and asking and discussing with the lecturer about personal difficulties found during the process.

This approach proposed in this study is significantly beneficial to be applied. However, teacher/lecturer should carefully consider several factors before confidently applying this teaching technique. Among the factors include learning objective, participants, tool used, the outcome expected, and not to mention infrastructure available. Additional challenges that need to tackle during the self-monitoring process include maintaining students' motivation to complete each of the stages and reducing their skepticism by providing adequate guidance and knowledge from the beginning until the phase is completed. Thus, teacher/lecturer should first motivate and encourage themselves consistently in implementing this strategy.

This present study is expected to ignite future research regarding Self-Regulated Learning using E-Portfolio in other subject areas or tools. Future studies may also consider to develop modified strategies in the self-monitoring phase of SRL using E-Portfolio.

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