



Development of Self-Regulated Learning Model based on Class Dojo Application (Digital Portfolio) in improving Student Achievement

hijrah¹,

hijrah@unismuh.ac.id

Hilda Hafid²,

hildahafid@unismuh.ac.id.

Saiful³,

saiful@unismuh.ac.id.

¹²³Pendidikan Bahasa Inggris, Universitas Muhammadiyah Makassar, Makassar

Received: 2023-09-26 Accepted: 2023-10-5

DOI: 10.24256/ideas.v11i2.4274

Abstract

The aim of the research is to find out how the process enhancing students' achievement by using Portofolio mobile Apps Portofolio based called Class Dojo to Junior High School Students worked. Research and Development method was applied by using three common steps in RnD; first step is the introduction where the researcher analyze the problems and collecting first data related to Self-Regulated Learning to the subject research; the next step is adjusting and develop the new model to the old learning process; and the last step is the evaluation process to assess the whole development applied in this research. It can be concluded that the development of learning aided by Class Dojo Application can improve students' self-regulated learning ability. There is an increase in student learning outcomes which means that it has met the specified success criteria. The increase has an impact on improving the quality of learning, in this case, learning resources increase with increasingly varied learning media, so that it can help teaching students.

Keywords: *Self-regulated Learning and Class Dojo Application*

1. Introduction

In social cognitive perspective academic achievement is seen as a complex relationship between individual abilities, self-perception, assessment of tasks, expectations of success, cognitive strategies and self-regulation, gender, parenting style, socioeconomic status, performance and individual attitudes towards school. According to Yulinawati (2007, p. 65) there are several factors that influence student success in achieving achievement, including intelligence, personality, school environment and home environment and student self-regulation in learning. Zimmerman and Martinez Pons (2002) mentioned that individuals who have SRL and believe that they are able to overcome academic materials will have success and high learning achievement compared to individuals who do not believe in their abilities. Individual efforts to achieve learning goals by activating and maintaining thoughts, emotions and behaviors are called SRL.

In the context of learning, a common phenomenon that occurs in many students today is that some students' behavior spends a lot of time only on entertainment matters compared to academic matters. This can be seen from the habit of staying up late, walking in the *mall* or *plaza*, watching television for hours, being addicted to *online games* and delaying work (Savitri, 2011). When a learner cannot utilize time well, often stalling time by doing activities that are not useful so that time is wasted in vain. Neglected tasks and not maximizing task completion have the potential to result in failure or obstruction of a learner achieving success.

In line with that, technological modernization has begun to penetrate the world of education. The world of education has begun to leave offline learning. The world of education has now begun to lead to learning that leads to online learning. Therefore, currently the learning process can be done by doing other activities. At this time, the teaching participants of the learning process are generation Z students. Teacher-centered learning is no longer suitable for this generation so it needs to change to a more student-centered approach, especially for students with very diverse abilities (Viridi. 2017). Through online learning, it is expected that students can further develop their abilities in a better direction. In relation to improving academic achievement through self-regulated learning, and considering the importance of the teacher's role in helping students to improve self-regulated learning skills in the learning process, the researcher is interested in examining how to develop student academic achievement by using digital portfolio application technology, namely the *Class Dojo* application.

Class management activities are always different in each class (Kumar, 2011: 70), making the Class Dojo application suitable for use in class management efforts, as a means of delivering information and fast communication, and as a support for student attitude assessment. Therefore, this study aims to look at the management of self-regulated learning based on the Class Dojo digital portfolio application in improving the academic achievement of 8th grade students of Unismuh Makassar Junior High School.

2. Literature Review

2.1. Self Regulated Learning

Self-regulated learning (SRL) is an activity where individuals who learn actively, compose, determine learning goals, plan and monitor, regulate and control cognition, behavioral motivation and the environment to achieve predetermined goals (Filho, 2001; Pintrich, 2004; Wolters, et. al, 2003). Theoretically, the ability to *self-regulate learning* is well developed in adolescence (Wang, 2004).

Some previous research on *self-regulated learning* shows that *self-regulated learning* is related to academic achievement. For example, research conducted by; Blair and Razza (Bodrova & Leung, 2008) found, children's regulative behavior from an early age can predict their school achievement rather than their IQ score; Weinstein & Mayer (Basuki, 2005) found, students who are able to empower SRL strategies, especially cognition and metacognition strategies will produce higher academic achievement than students who are unable to empower them. Sungur and Gungoren (2009) found that a school environment that encourages students to self-regulate has a positive effect on academic achievement. Stoegler and Ziegler (2005) also found that in general SRL intervention programs were found to be suitable for reducing *underachievement* and ultimately improving academic achievement in elementary school students.

Mouselides and Philippou (2005) also found that self-regulation strategies in learning (*mastery goal orientation*) as a strong predictor of *self-efficacy* and subsequent effects on achievement. Downson et al. (2005) also found that motivational regulation strategies predict academic achievement. Cobb (2003) found a significant relationship between behavioral aspects of SRL with academic achievement, Chen (2002) found a significant relationship between SRL strategies (*effort regulation*) with academic achievement, Alsa (2005) found a *significant* correlation between learning based on self-regulation with mathematics learning achievement in accelerated and regular program students at SMUN Yogyakarta, Basuki (2005) found a significant relationship between SRL with academic achievement in high school students in Jakarta, and Fatimah (2010) also found a significant relationship between SRL with academic achievement in accelerated high school students in Malang city. Thus it can be concluded that individuals will get good results, if they have good self-regulation.

2.2. Class Dojo App (Digital Portfolio)

Class Dojo is an online student-teacher-parent liaison book. The features are very diverse ranging from "story class", giving grades, learning and discussion space and space to collect assignments. Students' independence in learning can be directly monitored through this application. Class Dojo is very easy to use as it is quota friendly and can be used through smartphones.

The presence of technology-based learning media can help teachers convey material

in more detail and help students better understand the content of the material presented. Of course this trend must be utilized by teachers. If not, students will utilize their smartphones for entertainment purposes only. The logic is like this, if students use more time for learning or positive things then the time to play and do useless things will automatically decrease. This should be a special concern for teachers to spur themselves more in mastering information and communication technology such as multimedia, the internet or websites. The way to use the Class Dojo application is as follows; like any other application, Class Dojo must be downloaded first; register yourself using email, in the sign-in column; verify your account in the email; for teachers directly create classes on the application (the number of classes is not limited); invite students and parents; and the application is ready to use.

Method

1. Research Subjects and Locations

The subjects or population of this study were students of class VIII A Unismuh Junior High School Makassar. There were 24 students as the research sample. This research is a collaboration between lecturers and teachers. Therefore, in this study there were 2 teachers who participated. They are English and Mathematics subject teachers. The research location is at SMP Unismuh Makassar (SPUMA) during the even semester 2021-2022.

2. Research Approach

This study uses the Educational Research and Development (R&D) approach which refers to the theory of Borg and Gall in their book *"Educational Research"*. Borg and Gall (1979; 624) define the research and development approach in education as: *"a process used to develop and validate educational products"*. In this research, the type of research and development carried out leads to the sub domain of media and technology in education.

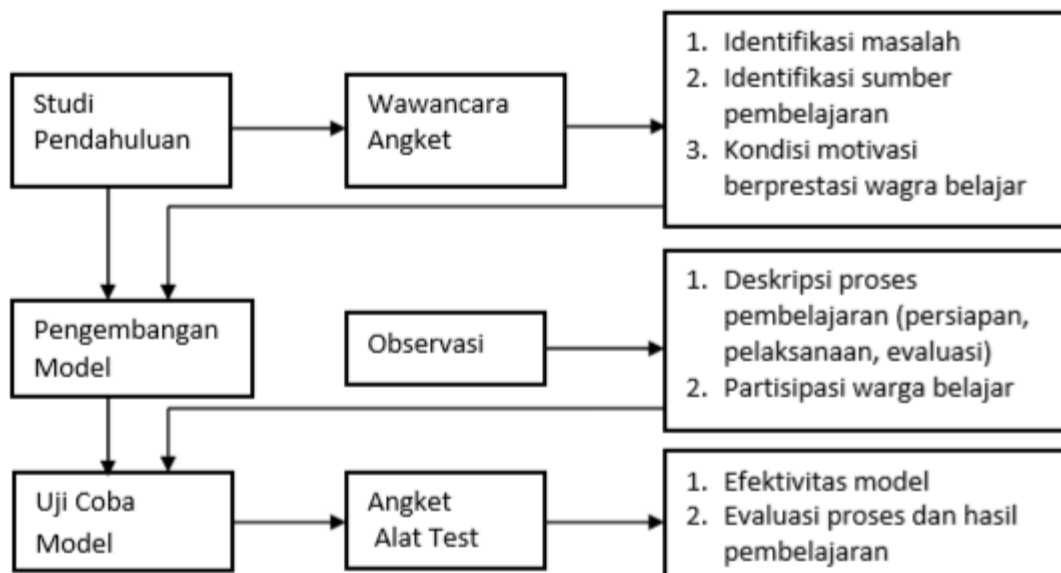
The implementation stage of this research is divided into three. In the first stage, researchers collected data by assessing data from respondents' characteristics. Then the measurement of SRL variables and the SRL model test were conducted to obtain strategic issues that would be discussed through *Focus Groups Discussion* (FGD) activities. FGD is a step to determine solutions as a basis for developing recommendations in the development of SRL models based on digital portfolio applications. FGDs were held at Unismuh Junior High School Makassar for 3 times with different groups, namely student group FGDs, teacher group FGDs, and policy maker group FGDs. The second stage is the implementation stage of the SRL model development using the Class Dojo application. At this stage, it is compiled based on the results of the FGD and the *Self Regulated Learning Model*

Development in the subjects that have been determined. It was discussed with four experts, namely educational technology experts, education experts and psychology experts. The third stage is the implementation stage of the SRL model.

3. Types of Instruments in Research and Development

Educational model development efforts are a type of multi-stage research, where at least researchers must conduct three types of research in one research period. Some instruments that can be used by researchers based on the stages of their research: 1) Preliminary research; in this study the instruments that can be used by researchers include questionnaires, interviews and documentation. 2) Conceptual model development; in developing a conceptual model, researchers must go through several stages such as: model development, and model validation. Research instruments are needed by researchers in the model validation phase. Instruments that can be used by researchers in model validation include: questionnaires or lists of questions in Focus Group Discussion (FGD) activities and structured interviews. 3) Model Testing; in model testing activities, researchers must prepare several instruments to evaluate the process and results of experiments conducted. In evaluating the process, researchers can use questionnaires (quantitative) if researchers intend to dig deeper into the information in the process evaluation (triangulation mixed method) then researchers can also triangulate with interviews and even participant observation. Meanwhile, in evaluating the results, especially to determine the effectiveness of the model, the instrument used is a questionnaire. There are two types of questionnaires used by researchers, namely test questionnaires and non-test questionnaires. The test questionnaire contains several questions to determine the extent of the research subject's knowledge of certain subjects. While the non-test questionnaire is related to changes in the attitude aspects that are the research objectives.

Figure 3.1. Chart of the research implementation process



Result and Discussion

The results of this development produce a product in the form of learning in the concept of Online Learning Environment by utilizing web-based applications that apply Self-Regulated Learning strategies. This development utilizes one of the Learning Social Network, namely the Class Dojo Application, which is an application that provides facilities similar to a liaison book, where one of the functions possessed by the liaison book is counseling. So that teachers can directly control students based on the subjects taught. The Class Dojo application that can be accessed via smartphone makes Class Dojo have high mobility.

This development product was validated to material experts, media experts and learning experts and tested on 24 students of Unismuh Makassar Junior High School. From the results of the trial validation, it was concluded that the learning development developed was declared valid so that it was feasible to use. This is evidenced by the results of the material test reaching a validity level of 84%, media experts reaching 89% validity and learning experts reaching 83%, the results of the trial to individual students were 80%.

The development of learning in English and Mathematics subjects at Unismuh Junior High School Makassar with the help of Dojo application was developed after a preliminary study by distributing questionnaires and interviews to teachers and students. The results of the preliminary study show that students need an application to make it easier for them to access lessons and collect assignments. Likewise with teachers, they need an application that makes it easy to input student learning outcomes.

To be able to facilitate the learning process of students who apply the principle of developing self-regulated learning, the method used is by increasing the number of tasks and exercises. Teachers assign students to record all learning activities, both structured and independent, in order to master learning materials and write them in a learning resume. With this resume, both students and teachers can monitor the learning process and results. For this reason, it is important to do not only give assignments but also collect and return student learning outcomes every time learning takes place.

In terms of utilization, the development results have been equipped with utilization instructions intended for students and teachers to facilitate the application of the development. The guidelines are in the form of procedural instructions that contain steps as a reference in utilizing the developed program.

Students and teachers gave a very positive response to the developed learning program. Even though it is not a new thing, the presence of the developed program is an interesting thing for them. This is in line with the expectations of those who are mostly accustomed to utilizing technology and want learning to be done with mobile applications.

The students welcomed the idea of learning with the Class Dojo App. In terms of motivation, there is also an increase in student learning through the developed program. They also do a lot of preparation before facing both online and face-to-face learning, for example by summarizing the material before and after class meetings. The results of this development are also similar to previous studies that have been conducted by several researchers as described in the previous section. In this study, the focus of development lies on the development of Class Dojo Application combined with self-regulated learning strategies to increase students' independence in learning.

Conclusion

Based on the results of research and discussion, it can be concluded that the development of learning aided by Class Dojo Application can improve students' self-regulated learning ability. There is an increase in student learning outcomes which means that it has met the specified success criteria. The increase has an impact on improving the quality of learning, in this case, learning resources increase with increasingly varied learning media, so that it can help teach students.

References

- Bandura, A., 1982. *Self Efficacy Mechanism in Human Agency*. America Psychologist. Vol. 37 No. 2. Stanford University USA. Hal 122–147.
- Bilanti, E., Susilawati, E., Suhartono, L., Salam, U., & Rezeki, Y. (2022). Developing a Minecraft Adventure Map to Support Eleventh Grade Senior High School Students' Vocabulary Learning. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*, 10(2), 1379 - 1393. doi:<https://doi.org/10.24256/ideas.v10i2.3000>
- Chen, S.C. (2002). Self-regulated learning strategies and achievement in an introduction to information systems course. *Journal Information Technology, Learning, and Performance*, 20, (1). <http://www.osra.org/itlpj/chenspring2002.pdf>.
- Chung, M.K. (2000). The development of self-regulated learning. *The Institute of Asia Pasific Education Development*, 1, (1), 55-56.
- Cobb, R. J., 2003. *The relationship between self-regulated learning behaviors and accademic performance in web-based course*. Disertation, Virginia: Blacksburg.
- Deasyanti, & Armeini, R.A., 2007. *Self Regulation Learning pada Mahasiswa Fakultas Ilmu Pendidikan Universitas Negeri Jakarta*. Perspektif Ilmu Pendidikan-Vol 16, hal 1–12.
- Desyanti, A.A., 2007. *Self Regulated Learning pada Mahasiswa Fakultas Ilmu Pendidikan Universitas Negeri Jakarta*. Penelitian. di Publikasikan dalam Jurnal Perspektif Ilmu Pendidikan Vol. 16 Th. VIII Oktober 2007
- Dewi, P., & Sari, D. (2022). Perception of Digital Storytelling in Overcoming Fear for Speaking English through Interdisciplinary Project of Gender Issues. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*,

10(2), 1635 – 1642. doi:<https://doi.org/10.24256/ideas.v10i2.2748>

Fatimah, S. (2010). Self-regulated learning dan prestasi akademik pada siswa program akselerasi. Thesis, tidak diterbitkan. Program Pascasarjana Universitas Muhammadiyah Malang.

Journal of Educational Psychology, 4, (2), 22-63. <http://www.stu.ca/-sbraat/SRL/A/Social0CognitiveViewofSelf-RegulatedAcademicLearning.pdf>

Rahil, Eka. 2013. *Motivasi Berprestasi dan Self Regulated Learning (SRL)*. Jurnal Ilmiah Psikologi Terapan Vol. 1, No 2. Universitas Muhammadiyah Malang. Diunduh dari <http://www.ejournal.umm.ac.id>. Diakses pada tanggal 3 September 2013.

Rita C. Richey, J. D. K., Wayne A. Nelson. (2009). *Developmental Research : Studies of Instructional Design and Development*.

Wa Rahma, Q. (2022). Developing Multimodal Mindful Material for Secondary School in Indonesia Post Covid-19 Pandemic. IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature, 10(2), 1220-1234. doi:<https://doi.org/10.24256/ideas.v10i2.3227ng>, B. (2004). *Self-regulated learning strategies and self-efficacy beliefs of children learning English as a second language*, Desertation, the Ohio State University.Columbus: Ohio.

Zimmerman, B.J. (2004). A social cognitive view of self-regulated academic learning.

Zimmerman, B. J. (1986). Becoming a self-regulated learner. Which are the key processes? *Contemporary Educational Psychology*, 11, 307-313.

Zimmerman, B.J., & Martinez Pons, M. (2001). Students differences in self regulated learning: Relating grade, sex, and giftedness to self efficacy and strategy use. *Journal of Educational Psychology*, 82 (1), 51-59.

Zimmerman, B.J. (1990). Self regulated learning and academic achievement: An overview. *Educational Psychologist*, 25 (1), 3-17.

Zimmerman, B.J. (1999). Acquiring writing revision skill, shifting from process goals to outcome self regulatory goals. *Journal of Educational Psychology*, 91 (2), 241-250

Zimmerman, B.J. (2002). Becoming a self regulated learner: An overview. *Theory into Practice*, 41, 64-70