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Student's Self-Regulated Learning in Online Class Design Based on Reflective Learning

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ABSTRACT

This study explored the connection between Self-Regulated Learning (SRL) strategies and student learning outcomes, alongside detailing the SRL strategies students employ in reflective learning contexts. Conducted as a quantitative descriptive with 53 student participants, the research utilized correlation analysis to examine the interrelationships between various SRL strategies and employed a three-stage qualitative analysis process: data reduction, data presentation, and conclusion drawing. The findings reveal significant positive correlations among SRL strategies, notably between learning responsibility and environmental structuring (r = 0.706), memory strategy and goal setting (r = 0.717), and goal setting and self-evaluation (r = 0.722). The least positive correlation was found between self-evaluation and organizing (r = 0.437). Additional positive relationships were identified between memory strategy and perceived value (r = 0.668), goal setting and value (r = 0.762), self-evaluation and value (r = 0.669), seeking assistance and value (r = 0.763), environmental structuring and value (r = 0.825), learning responsibility and value (r = 0.795), and organizing and value (r = 0.645). Reflective learning stages—comprising the forethought phase, the performance phase as evidenced by students presenting their experiences, and the self-reflection phase during evaluation—highlight the intricate dynamics of students' SRL strategies. This study underscores the positive impact of SRL strategies on learning outcomes, offering insights into the effective application of reflective learning in educational settings.

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1. INTRODUCTION

The learning process in the New Normal Era is currently changing. Learning usually carried out offline, and face-to-face is currently conducted online remotely. During this sudden pandemic, policies related to distance learning require new skills that must be learned and improved by both lecturers and

students. In addition to mastering IT, students, in particular, must have the independence to learn. Student independence can be achieved if it is self-initiative. Self-initiative learning can enable students to be able to learn independently in processing knowledge, students also have the desire to learn with incentives, manage time well, be honest, polite, disciplined, and reflect on the learning process and results. (Hinojo-Lucena et al., 2020).

Reflective learning within the New Normal Era presents a vital avenue for enhancing student learning outcomes. By integrating Self-Regulated Learning (SRL) strategies—comprising Memory Strategy, Goal Setting, Self-Evaluation, Seeking Assistance, Environmental Structuring, Learning Responsibility, and Organizing—it has been acknowledged that there exists a positive correlation with student learning achievements. The SRL framework encompasses a three-phase cycle: the forethought phase, focusing on task analysis and self-motivation; the performance phase, emphasizing self-control and self-observation; and the reflection phase, which involves self-judgment and self-reflection. These phases are sequentially aligned with reflective learning stages, including concept recognition, experience presentation, and evaluative reflection.

However, the effectiveness of reflective learning employing SRL strategies remains an area requiring further exploration, highlighting a research gap within this study. Future investigations are encouraged to assess the efficacy of reflective learning in conjunction with blended learning designs, and the potential integration of reflective learning within online educational frameworks is proposed to foster self-regulated learning and improve academic outcomes. Concurrently, the challenges associated with distance learning, such as reduced student initiative and engagement, underscore the complexities of remote education. Basilaia & Kvavadze (2020) contend that traditional face-to-face instruction surpasses distance learning in effectiveness, citing diminished learner engagement and heightened instances of academic dishonesty as significant concerns. The lack of direct oversight in online settings has been linked to students' casual approach to participation, including attending sessions inappropriately dressed, disengaging by turning off cameras, and not responding during live interactions. Cardinale et al. (2021) further elucidate the communication barriers inherent in remote learning environments, which impede effective information assimilation and character development. Moreover, Darmiany (2012) underscores the critical role of social interactions in learning, a component markedly constrained in virtual classrooms. These observations collectively highlight the intricate balance between embracing technological advancements in education and addressing the pedagogical and social challenges posed by distance learning.

One of the learning processes that involve these three factors is self-regulated learning. Students can have high competence through SRL, especially in initiative and character. Especially for early-level students with a good SRL, it is hoped to help them gain achievements at the following levels. More specifically, students are expected to have the ability and skills to regulate learning activities, control learning behavior, and know the goals, directions, and sources that support their learning following SRL principles. Through SRL, students can independently apply strategies to activate motivation, metacognition, and behavior in the learning process (Wong et al., 2019).

SRL has a vital role for students to be independent in learning. Learning is also centred on the lecturer and student-centered (active student learning). According to Dhanpat et al. (2019), learning in higher education is designed based on four assumptions: the concept of independence to self-regulate, adult experience is repertoire, readiness to learn, and life- or problem-centred learning orientation. Individual factors also play an essential role in SRL (Klimova et al., 2022). Furthermore, it is explained that each student has different advantages in each support, for example, teacher support, feedback, and instructions provided. Therefore, it is necessary to integrate the role of individuals, especially educators, with the learning strategies provided for online learning. This follows the explanation of Bell & Rothberg (2004), which explains that the transition to the learning process carried out remotely requires educators to develop learning models so that learning activities in the classroom remain active. Knowledge can be adequately conveyed (Khoerunnisa et al., 2021).

One of the learning strategies that can be used to support this SRL is reflective learning. Reflective learning is a deep and meaningful learning process developed based on cognitive and constructivist psychology theory (Atmojo et al., 2020). Through reflection learning, students can easily manage new thoughts and information to be interpreted and studied in-depth (Dukewich & Vossen, 2015). Reflective learning is a learning model that prioritizes thinking processes based on self-reflection, past experiences, and future expectations (Wong et al., 2019). Based on this explanation, reflective learning supports students' independent initiatives in managing their learning process. This is needed in distance learning in the current New Normal Era to increase student academic achievement. Therefore, to support SRL development, online classes are designed with reflective learning. Furthermore, it is necessary to know how students' SRL is when learning in online classes based on reflective learning. So that, the formulation of the research problem is: a) is there a positive relationship between the SRL strategy and student learning outcomes? Moreover, b) how are the students' SRL strategies in participating in reflective learning.

2. METHODS

To obtain information regarding the relationship between each SRL strategy, a quantitative approach was used. This type of correlational research is used to analyze quantitative data. Researchers use quantitative data analysis to see the relationship between each SRL strategy (Creswell, 2014). After that, to collect information about students' SRL strategies in participating in reflective learning, researchers used a qualitative approach. A qualitative approach is used to obtain in-depth information regarding the research focus that will be explored. The subjects in this research were 53 prospective elementary school teaching students who had taken part in reflective-based learning. The subject selection process was carried out using a purposive sampling approach. The considerations used to select subjects were subjects that suddenly carried out distance learning due to the pandemic. This subject is a new student who is still in the transition stage from high school to university. So SRL was not formed when studying at a university.

The data collection process is carried out using three ways, including (1) Learning outcomes test questions; (2) Questionnaire related to SRL strategy adapted from Bell & Rothberg (2004), (3) Interview, and (4) Observation. Learning outcomes test questions and SRL strategy questionnaires were used to obtain quantitative data. This data will be used to see the relationship between learning outcomes and SRL strategies. In contrast, interviews and observations will be used as confirmation data to strengthen the research findings. Quantitative data analysis used a correlation test using SPSS software. Meanwhile, qualitative data will be analyzed using three stages, namely: (1) Data Reduction, (2) Data Presentation, and (3) Drawing Conclusions (Miles & Hubernasn, 1992). The method steps are explained in detail as follows: (1) Data is reduced based on the results of observations and interviews with subjects who have taken part in reflective learning, (2) the data from the reduction is represented descriptively, namely related to SRL in reflective learning, (3) the data is concluded by looking at the SRL strategies used in reflective learning. The data described is the strategy used by the reflective learning that has been implemented.

3. FINDINGS AND DISCUSSION

3.1 Student Self-Regulated Learning After Participating in Reflective Learning

Self-regulated learning is evaluated by linking each strategy with student achievement, namely the results of student evaluation scores after participating in Learning. These strategies are Memory Strategy, Goal Setting, Self-Evaluation, Seeking Assistance, Environment Structuring, Learning Responsibility, and Organizing. The achievement of student learning outcomes and SRL strategies is known 6% of students get a score of less than 70, and 13.2% of students get an SRL score in the low category. Based on these results, it is necessary to conduct statistical tests to determine the relationship

between each strategy and Learning achievement. An analysis using SPSS 21 was carried out, and the following results are in Table 1:

Table 1. The correlation of SRL strategy and learning outcomes

		Memory Strategy	Goal Setting	Self-Evaluation	Seeking Assistance	Environmental Structuring	Learning Responsibility	Organizing	Value
Memory Strategy	Pearson Correlation	1	.717**	.620**	.628**	.564**	.541**	.472**	.668**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	53	53	53	53	53	53	53	53
Goal Setting	Pearson Correlation	.717**	1	.722**	.652**	.695**	.656**	.468**	.762**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
	N	53	53	53	53	53	53	53	53
Self-Evaluation	Pearson Correlation	.620**	.722**	1	.495**	.612**	.511**	.437**	.669**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.001	.000
	N	53	53	53	53	53	53	53	53
Seeking Assistance	Pearson Correlation	.628**	.652**	.495**	1	.670**	.696**	.581**	.763**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
	N	53	53	53	53	53	53	53	53
Environmental Structuring	Pearson Correlation	.564**	.695**	.612**	.670**	1	.706**	.491**	.825**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000
	N	53	53	53	53	53	53	53	53
Learning Responsibility	Pearson Correlation	.541**	.656**	.511**	.696**	.706**	1	.592**	.795**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000
	N	53	53	53	53	53	53	53	53
Organizing	Pearson Correlation	.472**	.468**	.437**	.581**	.491**	.592**	1	.645**
	Sig. (2-tailed)	.000	.000	.001	.000	.000	.000		.000
	N	53	53	53	53	53	53	53	53
Score	Pearson Correlation	.668**	.762**	.669**	.763**	.825**	.795**	.645**	1

	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	53	53	53	53	53	53	53	53

**. Correlation is significant at the 0.01 level (2-tailed).

Based on the results above, it is known that the correlation between strategies results in the most positive relationship between learning responsibility and environmental structuring (r = 0.706), memory strategy with goal setting (r = 0.717), and goal setting with self-evaluation (r = 0.722). While the lowest positive relationship is the relationship between self-evaluation and organizing (r = 0.437). There is a positive relationship between memory strategy with a value (r = 0.668), goal setting with a value (r = 0.762), self-evaluation with a value (r = 0.669), seeking assistance with a value (r = 0.763), environmental structuring with a value (r = 0.825), learning responsibility with a value (0.795), and organizing with a value (0.645).

Furthermore, the categorization data for SRL students in after participating in reflective learning obtained the following data in table 2:

Table 2. Student SRL Results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	7	13.2	13.2	13.2
	Average	32	60.4	60.4	73.6
	High	14	26.4	26.4	100.0
	Sum	53	100.0	100.0	

Based on the results obtained, about 13.2% still have low self-regulated learning. Based on the results of interviews with students who still have low scores with low self-regulated learning, they improve their learning goals, specifically on the next exam, aiming to get a score of more than 80. This means that students do a self-reflection phase. In this phase, students provide a self-assessment of the efforts made to realize learning goals (Koh, 2017). Based on the interview results, it is known that students who have low SRL have deficiencies in completing assignments as well as possible; they are still often lazy. This is also due to their low memory strategy. They do not make strategies for remembering the context being studied. They still often spend time on social media playing Instagram or TikTok rather than prioritizing completing tasks. To achieve reasonable learning goals, a person must be able to set strategies to recall what he has learned (Jalal, 1970). The use of preferred social media can cover the ability to remember the context being studied. The use of bad social media can divert students' focus from their learning tasks, which, if continued, will reduce learning achievement, social life, and students' physical and mental health (Engzell et al., 2021).

3.2 Reflective Learning Strategy Based on Self-Regulated Learning

The reflective learning strategy contains four stages: knowing the context, presenting experiences, reflecting, taking action/stating the results of reflection, and conducting evaluations. In practice, all these stages are integrated with the development of students' Self-Regulated Learning abilities. The relationship between reflective learning and the development of Self-Regulated Learning abilities can be described as follows:

Stage 1: Recognizing Context

At this stage, students are very enthusiastic about participating in the activity. Based on the results of interviews, after following the stage of understanding the context through synchronous and asynchronous learning, students can determine goals in learning. It can be said that students do a goal-

setting strategy. A person is said to be able to apply goal setting when he determines a goal or sub-goal and exerts efforts to achieve that goal (Pham et al., 2021). Determination of student goals can be seen from observations and interviews. The results of interviews with students are as follows:

Q : What are your goals in studying?

M1 : My goal is for myself to be able to control the growth and development of both myself and my students, more so to control the socio-emotional conditions and understanding of the physical and psychological conditions of the students. This is because I often encounter social-emotional problems in society

Q : Since when did you set that goal?

M1 : Since I attended lectures after discussions with lecturers. When I understand what the lecturer says, I also desire to apply it.

The interviews were also conducted for Masters with the same questions, and the following interview results were obtained:

Q : What are your goals in studying?

M1 : In this lecture, I decided to share the goals that I want to achieve, namely: 1. I want to be serious in participating in learning. 2. I really want to have a satisfying GPA of 3.9 so that the sacrifices my parents gave were not in vain with the results I got. 3. Improve my skills and confidence by actively participating in all learning activities. 4. and lastly, I want to graduate on time with satisfactory grades.

Q : Have you set these goals before taking this course?

M1 : Not yet. I set the goal after I took part in the lesson. Through discussion and question-and-answer activities with lecturers, besides understanding the material, I also know the importance of setting goals in learning.

Based on the interview results, there are two types of goals, namely specific goals and general goals. These specific goals are indirectly based on general goals. Setting student goals, especially in online learning, is closely related to learning strategies. Student learning strategies to determine these goals can be seen in students' activity when conducting a question and answer discussion either synchronously by asking directly to the lecturer or when learning asynchronously through WAG. This follows the research results conducted by Lidiawati & Helsa (2021), which explains that learning strategies to achieve the specified goals can be seen from student activities in participating in learning and planning to solve problems. Determining strategies for achieving learning objectives is evidence that students apply task analysis. Planning and choosing this strategy will continue to change according to the needs and problems faced to achieve these goals (Darmiany, 2012).

The stage of learning to understand the context is the first step for students to motivate themselves (self-motivation). It is known that based on the results of interviews, students can understand the importance of determining learning goals and determining learning goals after following the stages of understanding the context through discussions on google meet. Self-motivation refers to a person's belief (self-efficacy) to have confidence in achieving their learning goals (Kamardeen, 2015). Self-efficacy strongly influences student performance and attitudes in learning (Dukewich & Vossen, 2015).

Stage 2: Presenting Experience

At the activity stage, they present experiences through assignments to make papers for students to discuss with each other to gain experience in their groups. When students carry out this stage, they indirectly show their performance in implementing the planned learning strategies. This also means that students apply the performance phase in Self-Regulated Learning. The performance phase shows an effort in learning that affects concentration and performance in learning (Klimova et al., 2022). In

this phase, students do self-control and self-observation. This can be seen based on the results of interviews with students that students focus on both visual and audio in completing assignments. When completing assignments, students focus on the goal to complete the task as well as possible. They look for references from various sources, both on the internet and in printed books. When students face difficulties, students ask their group friends and lecturers. This is the application of help seeking strategy to a self-regulated learning strategy. Students realize that the help of others to achieve maximum results is very important (Hobbins et al., 2018). Online help-seeking learning is done through communication media such as WA.

M2 : I have to focus when listening to the material or visual or audio skills. I also maximize the discussion with my group friends to complete the task.
Q : What experience did you get from this activity?
M2 : I gained experience in completing assignments by looking for reliable references in both printed books and on the internet. I also ask friends and lecturers if I face difficulties.
Q : What difficulties did you experience in completing the task?
M2 : Communication with friends because some of my group's friends are out of town. So, the discussion is limited.
Q : How do you discuss completing the task?
M2 : We made groups and had several Zoom meetings.

Self-observation can be seen from interviews that students understand the difficulties they face in completing assignments. The difficulty lies in the communication barrier, which is done indirectly because of the distance. Setting goals in planning makes it easier to find out the causes of the difficulties encountered (Docherty-Skippen et al., 2020). Students can also solve these problems by maximizing supporting facilities such as Google Meet and WA. In online learning, the discussion area is beneficial to facilitate completing tasks by getting the perspectives of others; the discussion area also facilitates collaboration (Roblyer & Doering, 2014).

Stage 3: Doing Reflection

At this stage, students are very enthusiastic because they carry out discussions based on experiences that have been obtained by themselves and others. When a person learns by reflecting, he is carrying out meaningful learning. This follows the explanation by (Koh, 2017) that meaningful learning can be seen in students' ability to relate the concepts they have learned to events in everyday life based on experiences in the real world. Students can reflect on the given construction questions. The ability to construct their understanding for students will make a meaningful understanding. Meaningful learning can also be seen from the ability of students to relate the understanding that has been obtained with new knowledge that is self-articulated into a new understanding (Gencoglu et al., 2021).

Stage 4: Doing Action/Declaring Reflection Results

In activities at this stage, students are required to maximize their performance in learning. Students are asked to have new skills adapted to the development of 21st-century skills by integrating technology. Through making YouTube videos, the results of discussions, both in experience and reflection, raise creativity, communication, collaboration, and problem-solving skills to solve problems. These digital-based 21st-century skills are needed in work that can generate and realize ideas and information to solve problems (Desoete, 2019). Therefore, learning must be integrated with 21st-century skills. If teachers integrate critical thinking, collaboration, communication, and problem-solving skills, students will become more open to the environment through investigation and shape students' attitudes (Campbel, 2020).

In reflective learning in stage 4, students' creativity can be seen in the designs and animations made on the YouTube video display to make it enjoyable. Students make videos with effects and add sound to make it look more attractive than just reading the book. A person's creativity can be trained with an online platform that designs software and produces digital content (Savchuk, 2017). Growing creative skills in learning must be done continuously and continuously; one way is by creating activities that encourage students to create products. Activities to create innovative products in learning can help students by themselves be able to be creative and innovate (Darmiany & Maulyda, 2022).

Learning videos related to explanations of discussion results, presenting experiences, and reflections are also a way to develop communication and collaboration skills. Reflective learning can support practical communication skills and collaborative skills for subsequent classes. Based on the results of the video made, students can communicate the discussion results. They collaborate to produce exciting and easy-to-understand video explanations. Project-based social learning to produce a product requires students to communicate, collaborate, and negotiate (Aksal et al., 2012).

Problem-solving ability can be seen in the way students solve problems by making videos that include all members while their positions are far apart. The distance constraints due to the pandemic caused them not to be able to meet to solve problems directly. Based on the video results, each member collaborates by dividing the task by who communicates the results of the discussion. Furthermore, based on the division of tasks, members make videos explaining the material themselves and then combine them into a single video with the delivery of complete material. This shows the existence of a standard and social-based problem-solving. Social-constructivist-based learning in online learning helps the demands of students' competencies, one of which is problem-solving competence (Reuter et al., 2015).

Stage 5: Doing Evaluation

In this activity, evaluation is carried out by giving test questions related to student learning outcomes after participating in reflective learning. Meanwhile, based on the results of the tests given to students, the results showed that 68% of students scored more than or equal to 80, 26% of students scored more than 70, and less than 80. As many as 6% of students scored less than 70. More than 50% of students get a satisfactory score in student learning outcomes, which is about 68% of students get a score of more than 80. Based on these results, it can be said that reflective learning is effective for improving student learning outcomes. This follows research conducted by Darmiany & Maulyda (2022) that the effectiveness of online learning will occur if it includes adaptive, interactive, discursive, and reflective aspects.

4. CONCLUSION

Reflective learning, especially within the context of the New Normal Era, emerges as a viable alternative to enhance student learning outcomes. This method incorporates Self-Regulated Learning (SRL) strategies—Memory Strategy, Goal Setting, Self-Evaluation, Seeking Assistance, Environment Structuring, Learning Responsibility, and Organizing—to foster a positive impact on academic achievements. SRL is structured into three critical phases: the forethought phase, which includes task analysis and self-motivation; the performance phase, encompassing self-control and self-observation; and the reflection phase, involving self-judgment and self-reflection. Each phase aligns with specific stages of reflective learning: the forethought phase is initiated during concept recognition activities, the performance phase during the presentation of experiences, and the reflection phase during the evaluative stages. However, this study reveals a gap in understanding the effectiveness of reflective learning when integrated with SRL strategies. It points to the need for future research to explore the efficacy of this educational approach more thoroughly. Additionally, the research suggests investigating the potential of reflective learning within a blended learning design, advocating for the inclusion of reflective learning in online class designs. By doing so, the study anticipates not only the

development of self-regulated learning capabilities but also further improvement in learning outcomes. This recommendation for further research highlights an essential area for exploration, with the ultimate goal of optimizing educational strategies in the evolving landscape of digital and reflective learning.

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REFERENCES

Aksal, F. A., Altinay, Z., de Rossi, G., & ÎşmaN, A. (2012). Being online peer supporter-ed: Experiences from a work-based learning programme. *Egitim Arastirmalari - Eurasian Journal of Educational Research*, *46*, 1–22.

Atmojo, S. E., Muhtarom, T., & Lukitoaji, B. D. (2020). The level of self-regulated learning and self-awareness in science learning in the covid-19 pandemic era. *Jurnal Pendidikan IPA Indonesia*, *9*(4), 512–520. https://doi.org/10.15294/jpii.v9i4.25544

Basilaia, G., & Kvavadze, D. (2020). Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic in Georgia. *Pedagogical Research*, *5*(4). https://doi.org/10.29333/pr/7937

Bell, J., & Rothberg, S. J. (2004). The Relationship between Self-Regulation and Online Learning in a Blended Learning Context. *Third International Conference on Vibration Measurements by Laser Techniques: Advances and Applications*, *3411*(2), 14–22. https://doi.org/10.1117/12.307692

Campbel, S. (2020). Education and Curriculum Reform: The Impact They Have On Learning. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*, *3*(2), 1074–1082. https://doi.org/10.33258/birle.v3i2.1036

Cardinale, P., Rofi'i, M. S., Samputra, P. L., & Achdiawa, R. (2021). Enculturated Education for Strengthening Character Education in Preventing Intolerance and Radicalism. *TARBIYA: Journal of Education in Muslim Society*, *8*(1), 20–43. https://doi.org/10.15408/tjems.v8i1.20359

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th ed.)*. SAGE.

Darmiany, D. (2012). *Self-Regulated Learning (SRL) Riset dan Aplikasi*. Arga Puji Press.

Darmiany, D., & Maulyda, M. A. (2022). Decreasing Creativity in Elementary School Students During Online Learning Transition. *Eurasian Journal of Educational Research*, *97*(62), 154–167. https://doi.org/10.14689/ejer.2022.97.08

Desoete, A. (2019). Mathematics and metacognition in adolescents and adults with learning disabilities. *International Electronic Journal of Elementary Education*, *2*(1), 82–100. www.iejee.com

Dhanpat, N., De Braine, R., & Geldenhuys, M. (2019). Preliminary development of the Higher Education Hindrance Demands Scale amongst academics in the South African context. *SA Journal of Industrial Psychology*, *45*, 1–12. https://doi.org/10.4102/sajip.v45i0.1595

Docherty-Skippen, S. M., Karrow, D., & Ahmed, G. (2020). Doing Science: Pre-Service Teachers' Attitudes and Confidence Teaching Elementary Science and Technology. *Brock Education: A Journal of Educational Research and Practice*, *29*(1), 25–35.

Dukewich, K. R., & Vossen, D. P. (2015). Toward Accuracy, Depth and Insight: How Reflective Writing Assignments Can Be Used to Address Multiple Learning Objectives in Small and Large Courses. *Collected Essays on Learning and Teaching*, *8*, 97–114. https://doi.org/10.22329/celt.v8i0.4258

Engzell, P., Frey, A., & Verhagen, M. D. (2021). Learning loss due to school closures during the COVID-19 pandemic. *Proceedings of the National Academy of Sciences of the United States of America*, *118*(17). https://doi.org/10.1073/PNAS.2022376118

Gencoglu, B., Helms-Lorenz, M., Maulana, R., & Jansen, E. P. W. A. (2021). A Conceptual Framework for Understanding Variability in Student Perceptions. *Frontiers in Psychology*, *12*, 451–467. https://doi.org/10.3389/fpsyg.2021.725407

Hinojo-Lucena, F.-J., Dúo-Terrón, P., Ramos Navas-Parejo, M., Rodríguez-Jiménez, C., & Moreno-Guerrero, A.-J. (2020). Scientific Performance and Mapping of the Term STEM in Education on the Web of Science. *Sustainability*, *12*(6), 2279. https://doi.org/10.3390/su12062279

Hobbins, J. O., Eisenbach, M., Ritchie, K. L., & Jacobs, S. (2018). Investigating the Relationship between Residence Learning Community Participation and Student Academic Outcomes in a Canadian Institution. *The Canadian Journal for the Scholarship of Teaching and Learning*, *9*(2). https://doi.org/10.5206/cjsotl-rcacea.2018.2.7

Jalal, M. (1970). Kesiapan Guru Menghadapi Pembelajaran Jarak Jauh Di Masa Covid-19. *SMART KIDS: Jurnal Pendidikan Islam Anak Usia Dini*, *2*(1), 35. https://doi.org/10.30631/smartkids.v2i1.61

Kamardeen, I. (2015). Critically Reflective Pedagogical Model: a Pragmatic Blueprint for Enhancing Learning and Teaching in Construction Disciplines. *Construction Economics and Building*, *15*(4), 63. https://doi.org/10.5130/AJCEB.v15i3.4607

Khoerunnisa, N., Eti Rohaeti, E., & Sekar Ayu Ningrum, D. (2021). Gambaran self regulated learning siswa terhadap pembelajaran daring pada masa pandemi covid 19. *FOKUS (Kajian Bimbingan & Konseling Dalam Pendidikan)*, *4*(4), 298–308. https://www.journal.ikipsiliwangi.ac.id/index.php/fokus/article/view/7433

Klimova, B., Zamborova, K., Cierniak-Emerych, A., & Dziuba, S. (2022). University Students and Their Ability to Perform Self-Regulated Online Learning Under the COVID-19 Pandemic. *Frontiers in Psychology*, *13*, 145–157. https://doi.org/10.3389/fpsyg.2022.781715

Koh, J. H. L. (2017). Designing and integrating reusable learning objects for meaningful learning: Cases from a graduate programme. *Australasian Journal of Educational Technology*, *33*(5), 136–151. https://doi.org/10.14742/ajet.3072

Lidiawati, K. R., & Helsa. (2021). Online learning during covid-19 pandemic : how self-regulated learning strategies impact student engagement ? *Jurnal Psibemetika*, *14*(1), 1–10. https://doi.org/10.30813/psibernetika.v14i1.2570

Miles, & Hubernasn. (1992). *Analysis of qualitative data (terj)*. Press Library.

Pham, T. T. T., Le, H. A., & Do, D. T. (2021). The Factors Affecting Students' Online Learning Outcomes during the COVID-19 Pandemic: A Bayesian Exploratory Factor Analysis. *Education Research International*, *2021*. https://doi.org/10.1155/2021/2669098

Reuter, T., Schnotz, W., & Rasch, R. (2015). Drawings and Tables as Cognitive Tools for Solving Non-Routine Word Problems in Primary School. *American Journal of Educational Research*, *3*(11), 1387–1397.

Roblyer, M. D., & Doering, A. H. (2014). *Integrating Educational Technology into Teaching* (6th ed.). Pearson Education Limited.

Savchuk, T. (2017). Classification Schemes of Argumentation in the Humanities Discourse. *Vestnik Volgogradskogo Gosudarstvennogo Universiteta. Serija 2. Jazykoznanije*, *16*(1), 97–108. https://doi.org/10.15688/jvolsu2.2017.1.10

Wong, J., Baars, M., Davis, D., Van Der Zee, T., Houben, G. J., & Paas, F. (2019). Supporting Self-Regulated Learning in Online Learning Environments and MOOCs: A Systematic Review. *International Journal of Human-Computer Interaction*, *35*(4–5), 356–373. https://doi.org/10.1080/10447318.2018.1543084