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The Relationship between Digital Literacy Skills and Self-Regulated Learning Skills of English Language Education Students

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Abstract: The purpose of this study is to investigate, among students majoring in English Language Education at Universitas Sintuwu Maroso Poso, the relationship between digital literacy and skills related to self-regulated learning. The participants consisted of 88 students, with a convenient sampling method employed to select a sample size of 85 students. A survey was carried out with the purpose of determining the levels of self-regulated learning and digital literacy skills of the participants. The findings showed that the students performed at moderate levels in both of the domains that were examined. In addition, a favorable but not very strong link was discovered between self-regulated learning skills and digital literacy skills. These findings highlight the significance of understanding the interaction between these two skills and provide EFL educators with insights that may be used to improve effective learning practices among students enrolled in an English Language Education study program.
Keywords: *Digital literacy skills; Self-regulated learning skills; EFL students; EFL educators*

1. INTRODUCTION

Today, we live in an era where information is predominantly digital, and it is essential for individuals to possess digital literacy. Digital literacy is a person's skills and competencies to use digital tools to search, evaluate, use, and create information in digital formats (Mirmoadi & Satwika, 2022; Eshet, 2004; Gilster, 1997) for educational, social, and/or entertainment purposes (Istifci & Goksel, 2022). Christiani et al. describe digital literacy as a set of skills or abilities that must be possessed by every individual in utilizing digital media in the aspects of creativity, technology, personal security, internet safety, problem-solving, information, communication or netiquette, and navigation (Christiani, Tungka, & Nainggolan, 2022). Being digitally literate allows individuals to comprehend and create new information using digital tools, enabling active participation in the current era. Digital literacy facilitates the rapid expansion of information and the development of skills necessary to find, process, and produce digital content. In particular, individuals in the education sector, including students, should acquire digital skills, as they are vital for comprehending information delivered digitally. Given that most educational materials are now in digital format, students must become proficient in using digital technologies. A better understanding of digital usage enhances their ability to generate new information and ideas.

Self-regulated learning, on the other hand, involves the knowledge of effective learning strategies and the ability to regulate one's learning process. Self-regulated learning is a learning process through the self-awareness of each individual in developing their own knowledge. Students with self-regulated learning skills approach their educational tasks with confidence, diligence, and resourcefulness (Zimmerman, 2010). They find a way to succeed when they encounter obstacles such as poor study conditions, confusing teachers, or abstruse textbooks. Some previous studies also defined self-regulated learning. Firstly, Mirmoadi and Satwika (2022) claim that self-regulated learning is an ability that is closely related to the learning process, where many individuals are active in carrying out self-regulation, metacognition, motivation, and self-behavior. Secondly, Istifci and Goksel (2022) claim that self-regulated learning is the ability of learners to control factors or conditions that affect their learning. Thirdly, Nurhikmah (2021) claims that self-regulated learning is a student's effort to organize themselves in the learning process with good cognition, motivation, and learning behavior so that they can achieve the targets and learning goals that have been set. Lastly, Emine (2022) claims that self-regulated learning is the control that students have over their cognition, behavior, emotions, and motivation through the use of personal strategies to achieve the goals they have set.

Based on these definitions, it can be inferred that self-regulated learning refers to an individual's capacities or a set of skills to regulate their learning process without external regulation. The skills included in self-regulated learning are metacognitive, time management, environmental structuring, persistence, and help-seeking. Metacognitive skill consists of an individual's ability to do pre-learning preparations, create schedules for daily, weekly, or monthly study plans, set specific study goals, explore alternative problem-

solving approaches, employ strategies and evaluate their effectiveness, and assess their own understanding. An effective time management skill is an individual's ability to ensure timely completion of learning activities and assignments. Environmental structuring skills involve an individual's ability to select a suitable and productive learning environment that promotes comfort and efficiency. Persistence skill refers to the ability to maintain focus and concentration even when faced with boredom or a lack of interest in the task at hand. Help seeking skill entails seeking assistance or ideas from peers when encountering difficulties or challenges, including reaching out to friends or classmates to share problems and collaboratively find solutions (Emine, 2022; Jansen et.al., 2017).

Digital literacy and self-regulated learning are crucial abilities for every learner, enabling them to actively and independently organize their learning process in this digital age. Digital literacy facilitates the acquisition of information in education, while self-regulated learning helps individuals manage information and navigate the learning process in today's digital environment (Fuchs, Pösse, Bedenlier, Gläser-zikuda, Kammerl, Kopp, Ziegler, & Händel, 2022; Nurhikmah, 2021; Seputro, 2019). Based on these considerations, the researchers are interested in conducting a study to explore the connection between digital literacy skills and self-regulated learning skills. The present study aims to answer the following question: Is there a relationship between the digital literacy skills and self-regulated learning skills of English as a Foreign Language (EFL) students at Universitas Sintuwu Maroso?

2. METHOD

The design of this study is quantitative with a correlational study design. A quantitative study is one that uses a lot of numbers in presenting the data and is always systematic, planned, and clearly structured (Siyoto & Sodik, 2015), while a correlational design is used to see the relationship between one or more variables (Nurhikmah, 2021; Sudjana, 2006). The study population is study subjects located in the same area that possess similar characteristics, while a sample is part of the number and characteristics owned by the population or a small part of the population taken according to certain procedures so that they can represent the population (Siyoto & Sodik, 2015). The population in this study was 88 active students of the English Language Education Study Program in the even semester of 2022, while the sample was 85 students, taken conveniently. In this study, the researchers used two questionnaires to measure digital literacy skills and self-regulated learning skills. Since the researchers adapted the original questionnaire of self-regulated learning skills from Jansen et.al (Jansen, Van Leeuwen, Kester, & Kals, 2017), only this questionnaire was validated and tested for its reliability. The result shows that this adapted questionnaire has 34 valid items and is reliable at 0.92. The second questionnaire to measure was adopted from Christiani et al's prospective EFL teachers' digital literacy skills (Christiani, Tungka, & Nainggolan, 2022), with a total of 22 items. The questionnaires were distributed through Google Forms due to its ease.

3. RESULTS AND DISCUSSION

Tables 1 and 2 show the results of the student's level of digital literacy skills and their level of self-regulated learning skills, respectively.

Table 1. Students' Level of Digital Literacy Skills

Items	Score								Mean	Category
	1		2		3		4			
	F	%	F	%	F	%	F	%		
1	1	1.2	6	7.1	44	51.8	34	40.0	3.30	Moderate
2	1	1.2	7	8.2	38	44.7	39	45.9	3.35	Moderate
3	9	10.6	28	32.9	36	42.4	12	14.1	2.60	Moderate
4	0	0	7	8.2	49	57.6	29	34.1	3.25	Moderate
5	1	1.2	4	4.7	43	50.6	37	43.5	3.36	Moderate
6	2	2.4	7	8.2	41	48.2	35	41.2	3.28	Moderate
7	11	12.9	20	23.5	37	43.5	17	20.0	2.70	Moderate
8	3	3.5	16	18.8	45	52.9	21	24.7	2.98	Moderate
9	15	17.6	12	14.1	25	29.4	33	38.8	2.89	Moderate
10	3	3.5	11	12.9	43	50.6	28	32.9	3.12	Moderate
11	0	0	10	11.8	53	62.4	22	25.9	3.14	Moderate
12	5	5.9	18	21.2	41	48.2	21	24.7	2.91	Moderate
13	2	2.4	13	15.3	47	55.3	23	27.1	3.07	Moderate
14	14	16.5	30	35.3	25	29.4	16	18.8	2.50	Moderate
15	4	4.7	27	31.8	43	50.6	11	12.9	2.71	Moderate
16	0	0	8	9.4	57	67.1	20	23.5	3.14	Moderate
17	1	1.2	6	7.1	48	56.5	30	35.3	3.25	Moderate
18	1	1.2	3	3.5	25	29.4	56	65.9	3.60	High
19	16	18.8	44	51.8	21	24.7	4	4.7	2.15	Moderate
20	0	0	3	3.5	22	25.9	60	70.6	3.67	High
21	0	0	3	3.5	52	61.2	30	35.3	3.31	Moderate
22	8	9.4	31	36.5	40	47.1	6	7.1	2.51	Moderate

As seen in Table 1, all students showed a high level of digital literacy skills in indicators 18 (internet safety) and 20 (netiquette), while displaying a moderate level in the remaining indicators.

Table 2. Students' Level of Self-regulated Learning Skills

Item	Answer Score								Mean	Category
	1		2		3		4			
	F	%	F	%	F	%	F	%		
1	2	2,4	7	8,2	48	56,5	28	32,9	3,20	Moderate
2	1	1,2	9	10,6	49	57,6	26	30,6	3,17	Moderate
3	2	2,4	27	31,8	42	49,4	14	16,5	2,80	Moderate
4	1	1,2	7	8,2	54	63,5	23	27,1	3,16	Moderate
5	2	2,4	17	20,0	49	57,6	17	20,0	2,95	Moderate
6	1	1,2	3	3,5	58	68,2	23	27,1	3,21	Moderate
7	1	1,2	13	15,3	55	64,7	16	18,8	3,01	Moderate
8	1	1,2	11	12,9	61	71,8	12	14,1	2,98	Moderate
9	0	0	9	10,6	59	69,4	17	20,0	3,09	Moderate
10	1	1,2	17	20,0	45	52,9	22	25,9	3,03	Moderate
11	0	0	16	18,8	47	5,3	22	25,9	3,07	Moderate
12	0	0	5	5,9	53	62,4	27	31,8	3,25	Moderate
13	0	0	6	7,1	58	68,2	21	24,7	3,17	Moderate
14	0	0	6	7,1	54	63,5	25	29,4	3,22	Moderate
15	0	0	8	9,4	45	52,9	32	37,6	3,28	Moderate
16	1	1,2	16	18,8	53	62,4	15	17,6	2,96	Moderate
17	1	1,2	10	11,8	55	64,7	19	22,4	3,08	Moderate
18	0	0	10	11,8	59	69,4	16	18,8	3,07	Moderate
19	5	5,9	22	25,9	44	51,8	14	16,5	2,78	Moderate
20	1	1,2	6	7,1	32	37,6	46	54,1	3,44	High
21	2	2,4	9	10,6	39	45,9	35	41,2	3,25	Moderate
22	1	1,2	8	9,4	43	50,6	33	38,8	3,27	Moderate
23	2	2,4	3	3,5	48	56,5	32	37,6	3,29	Moderate
24	2	2,4	13	15,3	53	62,4	17	20,0	3,00	Moderate
25	4	4,7	15	17,6	45	52,9	21	24,7	2,97	Moderate
26	3	3,5	7	8,2	47	55,3	28	32,9	3,17	Moderate
27	1	1,2	8	9,4	46	54,1	30	35,3	3,23	Moderate
28	2	2,4	5	5,9	45	52,9	33	38,8	3,28	Moderate
29	1	1,2	1	1,2	52	61,2	31	36,5	3,32	Moderate
30	1	1,2	4	4,7	43	50,6	37	43,5	3,36	Moderate
31	0	0	14	16,5	40	47,1	31	36,5	3,20	Moderate
32	1	1,2	13	15,3	54	63,5	17	20,0	3,02	Moderate
33	0	0	2	2,4	49	57,6	34	40,0	3,37	Moderate
34	2	2,4	3	3,5	47	55,3	33	38,8	3,30	Moderate

Table 2 shows that all students showed a moderate level of self-regulated learning skills in almost all indicators but indicator 20 (time management). Based on these results, it is safe to infer that those students showed a moderate level of proficiency in both their digital literacy skills and self-regulated learning skills.

This study was carried out to test the following alternative hypothesis, There is a significant relationship between digital literacy skills and self-regulated learning skills in the English Language Education study program at Universitas Sintuwu Maroso." SPSS 24 was used to run the statistical procedure needed for testing the hypothesis. The correlation coefficient (r) was determined to be positive, with a value of 0.276. This number, however, falls into the "Low" category, implying that students' digital literacy abilities have a modest positive link with their self-regulated learning skills. Furthermore, the results suggest that the alternative hypothesis was accepted.

According to the findings of the study, students at Universitas Sintuwu Maroso who are enrolled in the English Language Education Study Program have a moderate level of both digital literacy abilities and self-regulated learning skills. Even if there is a positive association between these skills, the strength of the relationship is considered weak. The findings point to a meaningful connection, both positively and significantly, between the students' levels of digital literacy and their capacity for self-regulated learning. However, it is essential to keep in mind that high levels of digital literacy do not always correspond to high levels of self-regulated learning, and the same can be said about the other way around. The degree of correlation between these two variables is modest, despite the fact that they are interrelated and influence each other. Due to the fact that the results of the study only show a weak link, it is essential to carry out additional studies in order to verify these findings.

This finding confirms the earlier findings from related studies (Fuchs, Pösse, Bedenlier, Gläser-zikuda, Kammerl, Kopp, Ziegler, & Händel, 2022; Mirmoadi & Satwika, 2022). Mirmoadi and Satwika (2022) found a favorable but relatively weak link between self-regulated learning skills and digital literacy skills among students attending Surabaya State University. Similarly, a study that was conducted by Fuchs et.al in 2022 indicated that despite the high levels of digital readiness exhibited by prospective teachers, there was only a minimal association between their digital readiness and their ability to engage in online self-regulated learning. The study that Istifci and Goksel conducted in 2022 discovered, among other things, that students' perceptions of their ability to self-regulate their learning improved concurrently with their degrees of digital literacy.

Since this study indicates that students in the English Language Education study program have moderate levels of digital literacy skills and self-regulated learning skills, it highlights the need to prioritize the development of these skills in EFL instruction. Integrating technology and digital tools into language learning activities can enhance students' digital literacy and help them effectively navigate the digital landscape. In doing so, lecturers or EFL educators can also encourage students to take responsibility for their own learning, set goals, monitor their progress, and employ effective learning strategies. Providing guidance and support to enhance self-regulated learning can empower students to become independent and lifelong learners.

High digital literacy skills do not always correspond to high self-regulated learning skills, and vice versa. This means that EFL educators should acknowledge the unique characteristics of these two domains and design instructional approaches that address both aspects separately. This can involve incorporating specific activities and interventions targeting digital literacy and self-regulated learning to enhance students' proficiency in each area.

Given the variability in students' levels of digital literacy and self-regulated learning skills, it is also crucial for EFL educators to individualize instruction to cater to their diverse needs, such as assessing students' strengths and weaknesses in these areas and providing tailored support and resources accordingly. By catering to individual learning profiles, EFL educators can better facilitate the development of both digital literacy and self-regulated learning skills.

4. CONCLUSION

This research project showed that English Language Education students at Universitas Sintuwu Maroso in 2022 have moderate levels of digital literacy skills and self-regulated learning skills. There is a positive and substantial link, though a very minor one, between the students' levels of digital literacy and their levels of ability to self-regulate their learning. This shows that a high level of digital literacy skills does not necessarily translate to a high level of abilities in self-regulated learning, and vice versa. Similarly, self-regulated learning skills may not necessarily translate to a high level of digital literacy. To put it another way, students who are good at self-regulation learning might not necessarily be good at accessing, processing, and producing digital information, and vice versa. Overall, this research emphasizes the importance of integrating digital literacy and self-regulated learning skills into EFL practices, recognizing their unique aspects, and individualizing instruction to foster students' proficiency in these domains.

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