



Self-regulated online learning for bachelor of elementary education learners' promoting achievement goals

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Abstract

As faculty members are faced with the challenges of delivering quality instruction in the midst of this worldwide pandemic, teachers/faculty members must prioritize the urgency of demand and offer a workable plan to come up with this learning modality. The need to utilize best practices in online instruction and course design is crucial.

This study aimed to determine the self-regulated online learning skills of the Bachelor of Elementary Education learners in Batangas State University. Specifically, it focused on how the respondents be described in terms of sex and program where they belong; how may the self-regulated online learning skills of the respondents be described in terms of metacognitive skills; time management skills; environmental structuring; persistence; and help seeking; the significant difference in the self-regulated online learning skills of respondents when grouped according to their profile variables; the achievement goals of the respondents; and the self-regulated online learning skills predict respondents' achievement goals.

The researcher utilized as survey questionnaire as the main data gathering instrument in this research study. The questionnaire contained items for student-respondents' assessment regarding their self-regulated online learning skills metacognitive skills which include metacognitive skills, time management skills, environmental structuring, persistence, and help seeking.

In choosing the respondents, the researcher utilized Raosoft calculator with 95% confidence level and 5% margin of error, the researcher obtained 718 as the number of samples out of 737 students who were enrolled in the teacher education program.

This study assessed the online self-regulated skills of students who are enrolled in varied teacher education programs. The findings of this study showed how education students positively responded to the demands of the 21st century education through dynamically engaging themselves in online learning. Thus, the acquisition of online self-regulated learning skills is deemed a pivotal factor in broadening and enhancing pre-service teachers' knowledge and experiences for positive learning even amid the pandemic.

Keywords: Self-regulated, online learning, achievement goals, pre-service teachers

Introduction

The unforeseen emergence of Corona Virus Disease 2019 (COVID-19) has prompted educational institutions to deliver instruction in flexible modalities, and explore technologies that could support the delivery of classes without physical meeting. Online learning, where teaching and learning are freed from the constraint of time, place, and pace of study, is a viable instructional response to the COVID-19 pandemic. Online learning is a form of distance education, where learning takes place partially or entirely over the Internet. It is claimed that any learning arrangement with substantial elements of online learning is considered as online learning (Nguyen, 2015). This educational migration to an online learning system has changed the landscape of learning context from physical to virtual set-up. Online courses are conducive to students who favor self-regulated learning, a critical factor for successful online learning (You & Kang, 2014).

Learners should use an appropriate strategy to make sure they can learn from the online learning environment. One of the suitable strategies is self-regulated learning (SRL).

Self-Regulated Learning (SRL) is a set of processes that learners use to both monitor and manage their thoughts, feelings, and actions, in a manner that promotes efficient learning. A few common examples include behaviors such as goal-setting, planning, reflection, and the use of learning strategies (Zimmerman, 2000). Self-directed learning (SDL) refers to the psychological processes of learners that

purposively direct themselves to gain knowledge and understand how to solve problems (Long, 1994). Self-directed learners usually more actively participate in learning tasks such as reading online learning material, completing classroom tasks, planning and evaluating milestones of learning. High-level self-management is important in SDL and learners to need to adopted different strategies in dealing with various problems (Lee & Teo, 2010). Similar to self-regulated learning, SDL also emphasizes on goal setting and choice making, which are crucial to student collaborative learning (Gilbert & Driscoll, 2002). The difference between SDL and self-regulated learning lays in their required skills. The constructs of SDL are at the macro level, and constructs of self-regulated learning belong to micro-level (Jossberger, Brand-Gruwel, Boshuizen, & Wiel, 2010).

By supporting student use of SRL strategies, colleges can promote the motivational, behavioral, and cognitive skills needed to become self-regulated learners. Schunk and Zimmerman (1998) state as follows:

“An area that lends itself well to self-regulation is distance learning, where instruction originates at one site and is transmitted to learners at distant sites.

Self-regulation seems critical due to the high degree of student independence deriving from the instructor's physical absence. In particular, we recommend research on the type of self-regulatory strategies that allow good distance learning” (p. 230).

This study sought to accomplish some of Zimmerman’s vision for future research in SRL by using the online classroom as a medium to promote self-regulatory skills among learners taking online education courses. Through the acquisition of these skills, it is hoped that teachers will be more prepared to develop the ideal learning environment of the 21st century classroom. Through the use of SRL strategies, teachers can be encouraged to identify new and beneficial learning and teaching technologies, set goals for the inclusion of these technologies into curriculum, and integrate these technologies for the appropriate learning and teaching tasks. It is also hoped that the development of self-regulatory skills supports students’ successes in future online courses.

As faculty members are faced with the challenges of delivering quality instruction in the midst of this worldwide pandemic, teachers/faculty members must prioritize the urgency of demand and offer a workable plan to come up with this learning modality. Thus, the need to prepare a model framework to provide students’ self-regulated online learning and establish their achievement goals.

The implications of this study are underscored with significance to a number of recipients. For administrators, this paper could be a basis for revisiting and designing policies adaptable to the new college curriculum. For professors and instructors, this may be used for adjusting, modifying and reorienting programs, methods and strategies, and concurrently utilizing the gathered data from this study. Ultimately this research could be beneficial to the ultimate client- the students, the end product of the research, may provide input in modeling self-regulating learning strategies and thus improve learners’ achievement.

In particular, the Batangas State University is keen to be involved, to take action and keep up with the updates in education. Using the SLR, learners are able to have clearer expectations for themselves on what constitutes success and are able to better motivate themselves to complete their work (Yeh *et al.*, 2019) ^[9]. On the other hand, technology plays a major role in the 21st century as it helps the teachers achieve effective delivery of lesson and also helps students in learning. Technology, Pedagogy Content Knowledge (TPACK) framework focuses on the integration of technology to enhance student learning in a classroom. As it identifies the different types of knowledge needed for effective teaching and learning, and how teachers themselves could enhance this knowledge, TPACK framework thus becomes a productive way to consider how teachers could integrate educational technology into the classroom (Kurt, 2018) ^[4].

Objectives

This study aimed to determine the self-regulated online learning skills of pre-service teachers under the Bachelor of Elementary Education Program (BEED) in Batangas State University.

Specifically, this study aimed to answer the following research questions

1. How may the self-regulated online learning skills of pre-service teachers be described in terms of:
 - 1.1 metacognitive skills;
 - 1.2 time management skills;
 - 1.3 environmental structuring;
 - 1.4 persistence; and
 - 1.5 help seeking?
2. What are the achievement goals of the respondents?
3. Is there a significant relationship between the respondents’ self-regulated online learning skills of and their achievement goals?
4. What self-regulated online learning skills predict pre-service teachers’ achievement goals?

Materials and Method

The researcher utilized as survey questionnaire as the main data gathering instrument in this research study. The questionnaire contained items for student-respondents’ assessment regarding their self-regulated online learning skills metacognitive skills which include metacognitive skills, time management skills, environmental structuring, persistence, and help seeking.

The questionnaire underwent validation and reliability testing and was pilot tested prior to its distribution to the respondents.

Ethical Concerns

There are no ethical concerns that could possibly emanate from the conduct of this study. However, the respondents were informed about the objectives of the research and that their responses will be utilized for this study. The researchers also assured the research participants of the anonymity and confidentiality of their identities and responses.

Results and Discussion

Description of the Respondents

The respondents were all students enrolled under the teacher education program, specifically Bachelor of Elementary Education (BEEd) from all branches or campuses of Batangas State University in the Division of Batangas in ARASOF- Nasugbu, Balayan, Lemery, Pablo Borbon, and Rosario with a total number of 737 students.

Table 1: BEEd Pre-Service Teachers’ Self-Regulated Online Learning Skills in terms of Metacognitive

Indicators	WM	SD	VI
1. I think about what I really need to learn before I begin a task in this online course.	5.764	1.147	True to me
2. I ask myself questions about what I am to study before I begin to learn for this online course.	5.743	1.023	True to me
3. I set short-term (daily or weekly) goals as well as long-term goals (monthly or for the whole online course).	5.597	1.167	True to me
4. I set goals to help me manage my studying time for this online course.	5.931	1.163	True to me
5. I set specific goals before I begin a task in this online course.	5.938	1.098	True to me
6. I think of alternative ways to solve a problem and choose the best one for this online course.	5.833	1.038	True to me
7. I try to use strategies in this online course that have worked in the past.	5.618	1.116	True to me
8. I have a specific purpose for each strategy I use in this online course.	5.632	1.133	True to me
9. I am aware of what strategies I use when I study for this online course.	5.583	1.162	True to me
10. Although we don’t have to attend daily classes, I still try to distribute my studying time for this	5.694	1.225	True to me

Indicators	WM	SD	VI
online course evenly across days.			
11. I periodically review to help me understand important relationships in this online course.	5.729	1.012	True to me
12. I find myself pausing regularly to check my comprehension of this online course.	5.465	1.206	Somewhat true to me
13. I ask myself questions about how well I am doing while learning something in this online course.	5.708	1.140	True to me
14. I think about what I have learned after I finish working on this online course.	5.681	1.107	True to me
15. I ask myself how well I accomplished my goals once I'm finished working on this online course.	5.743	1.102	True to me
16. I change strategies when I do not make progress while learning for this online course.	5.660	1.258	True to me
17. I find myself analyzing the usefulness of strategies while I study for this online course.	5.542	1.188	True to me
18. I ask myself if there were other ways to do things after I finish learning for this online.	5.778	1.173	True to me
COMPOSITE MEAN	5.7022	0.94161	True to me

Legend: 6.50 – 7.00 = Very True of Me; 5.50 – 6.49 = True of Me; 4.50 – 5.49 = Somewhat True of Me; 3.50 – 4.49 = Neutral; 2.50 – 3.49 = Somewhat Untrue to Me; 1.50 – 2.49 = Untrue to Me; 1.00 – 1.49 = Very Untrue to Me

Based on the results shown in Table 1, the level of extent of the respondents' self-regulated online learning in terms of metacognitive skills obtained a composite mean of 5.70 with an adjectival rating of *True of Me*. Out of all the indicators, the results showed that most of the respondents possessed this metacognitive skill "I set goals to help me manage my studying time for this online course" with the highest weighted mean of 5.94, indicating *True of Me*. Azevedo (2005) posited that learners struggle in online learning environments because they do not use critical self-regulated learning (SRL) strategies (Azevedo, 2005), and metacognitive skills entails having the focus and attention

on tasks for deeper learning. This is congruent with the study of Stijnen (2012) who discovered that student-teachers' use of metacognitive skills and motivation for learning increased significantly in learning environments with increased SRL opportunities. The indicator which got the lowest weighted mean of 5.47, indicating *Somewhat True of Me*, is "I find myself pausing regularly to check my comprehension of this online course." As stipulated by McClendon (1996) in this study, one of the challenges in sustaining a self-regulated learning online environs is that pre-service teachers do not use effective learning strategies as students at a sufficient level.

Table 2: Pre-Service Teachers Self-Regulated Online Learning Skills in terms of Time Management

Indicators	WM	SD	VI
1. I find it hard to stick to a study schedule for this online course.	4.875	1.358	Somewhat true to me
2. I make sure I keep up with the weekly readings and assignments for this online course.	5.465	1.262	Somewhat true to me
3. I often find that I don't spend very much time on this online course because of other activities.	4.438	1.554	Neutral
COMPOSITE MEAN	4.9259	0.98508	Somewhat true to me

Legend: 6.50 – 7.00 = Very True of Me; 5.50 – 6.49 = True of Me; 4.50 – 5.49 = Somewhat True of Me; 3.50 – 4.49 = Neutral; 2.50 – 3.49 = Somewhat Untrue to Me; 1.50 – 2.49 = Untrue to Me; 1.00 – 1.49 = Very Untrue to Me

As shown in Table 2, the level of extent of the respondents' self-regulated online learning in terms of time management skills obtained a composite mean of 4.93, indicating *Somewhat True of Me*. The results showed that most student-respondents are purposively engaged to attend to their online tasks since the indicator "I make sure I keep up with the weekly readings and assignments for this online course" got the highest weighted mean of 5.47 with an adjectival rating of *Somewhat True of Me*. Moreso, out of all the indicators, the indicator "I often find that I don't spend very much time on this online course because of other

activities" got the lowest weighted mean of 4.44 which indicated *Neutral*. It can be noted in the results that there can be several factors that affect students' involvement in their online activities one of which Yang (1993) stated in his study that SRL skills were important variables in the amount of information learned by learners, the control learners exhibited over their learning environment, and the amount of time learners needed to complete a task. This strongly implies that it is the students who plan the amount of time to be spent in engaging themselves to online learning and in performing online tasks and activities.

Table 3: Pre-Service Teachers Self-Regulated Online Learning Skills in terms of Environmental Structuring

Indicators	WM	SD	VI
1. I choose the location where I study for this online course to avoid too much distraction.	6.035	1.265	True to me
2. I find a comfortable place to study for this online course.	5.986	1.306	True to me
3. I know where I can study most efficiently for this online course.	5.924	1.212	True to me
4. I have a regular place set aside for studying for this online course.	5.792	1.327	True to me
5. I know what the instructor expects me to learn in this online course.	5.431	1.299	Somewhat true to me
COMPOSITE MEAN	5.8333	1.12219	True to me

Legend: 6.50 – 7.00 = Very True of Me; 5.50 – 6.49 = True of Me; 4.50 – 5.49 = Somewhat True of Me; 3.50 – 4.49 = Neutral; 2.50 – 3.49 = Somewhat Untrue to Me; 1.50 – 2.49 = Untrue to Me; 1.00 – 1.49 = Very Untrue to Me

As shown in Table 3, the level of extent of student-teachers' self-regulated online learning in terms of environmental structuring obtained a composite mean of 5.83, indicating *True of Me*. The indicator which got the highest weighted mean of 6.04 with an adjectival rating of *True of Me* is "I

choose the location where I study for this online course to avoid too much distraction." The results showed that most of the respondents have control of their learning environment. In the study of Slay (1997), he suggested that self-regulated learners possess knowledge of a range of

strategies to achieve learning goals. One of these is taking full responsibility of one’s learning and how this learning would be made possible. Moreso, the indicator which got the lowest weighted mean of 5.43, indicating *Somewhat True of Me*, is “I know what the instructor expects me to learn in this online course.” It was mentioned in this study that there is a relationship between a teacher’s own learning

behaviour and their practices in class (Hocevar, 2007). This denotes the fact that teachers should make the pre-service teachers fully aware of their learning expectations since there is a high correlation between teachers’ self-regulation skills and the skills of students in developing their self-regulation (Randi, 2004).

Table 4: Pre-Service Teachers Self-Regulated Online Learning Skills in terms of Persistence

Indicators	WM	SD	VI
1. When I am feeling bored studying for this online course, I force myself to pay attention.	5.403	1.366	Somewhat true to me
2. When my mind begins to wander during a learning session for this online course, I make a special effort to keep concentrating.	5.688	1.314	True to me
3. When I begin to lose interest for this online course, I push myself even further.	5.583	1.309	True to me
4. I work hard to do well in this online course even if I don’t like what I have to do.	5.535	1.384	True to me
5. Even when materials in this online course are dull and uninteresting, I manage to keep working until I finish.	5.708	1.228	True to me
COMPOSITE MEAN	5.5833	1.16799	TRUE OF ME

Legend: 6.50 – 7.00 = Very True of Me; 5.50 – 6.49 = True of Me; 4.50 – 5.49 = Somewhat True of Me; 3.50 – 4.49 = Neutral; 2.50 – 3.49 = Somewhat Untrue to Me; 1.50 – 2.49 = Untrue to Me; 1.00 – 1.49 = Very Untrue to Me

Based on the results shown in Table 4, the level of extent of student-teachers self-regulated online learning in terms of persistence obtained a composite mean of 5.58 which indicated *True of Me*. Out of all the indicators, “Even when materials in this online course are dull and uninteresting, I manage to keep working until I finish” got the highest weighted mean of 5.71 with an adjectival rating of *True of Me*. In the study of Yang (1993), he stated that the activities and resources provided to learners should enable student-teachers to obtain skills needed to become self-regulated

learners. Albeit the probable mismatch of online learning resources with pre-service teachers’ needs and interests, they were still motivated to learn and perform their tasks which is considered a significant manifestation of self-regulated online learning in which students can understand and control their learning environment. Also, this was reinforced by the respondents’ obtained responses for the indicator “When I am feeling bored studying for this online course, I force myself to pay attention” which got the lowest weighted mean of 5.40, indicating *Somewhat True of Me*.

Table 5: Pre-Service Teachers Self-Regulated Online Learning Skills in terms of Help Seeking

	WM	SD	VI
1. When I do not fully understand something, I ask other course members in this online course for ideas.	5.750	1.422	TRUE OF ME
2. I share my problems with my classmates in this course online so we know what we are struggling with and how to solve our problems.	5.451	1.621	SOMEWHAT TRUE OF ME
3. I am persistent in getting help from the instructor of this online course.	5.035	1.562	SOMEWHAT TRUE OF ME
4. When I am not sure about some material in this online course, I check with other people.	5.708	1.379	TRUE OF ME
5. I communicate with my classmates to find out how I am doing in this online course.	5.632	1.490	TRUE OF ME
COMPOSITE MEAN	5.515	1.295	TRUE OF ME

Legend: 6.50 – 7.00 = Very True of Me; 5.50 – 6.49 = True of Me; 4.50 – 5.49 = Somewhat True of Me; 3.50 – 4.49 = Neutral; 2.50 – 3.49 = Somewhat Untrue to Me; 1.50 – 2.49 = Untrue to Me; 1.00 – 1.49 = Very Untrue to Me

As shown in Table 5, the level of extent of pre-service teachers’ self-regulated online learning in terms of help seeking obtained a composite mean of 5.52 with an adjectival rating of *True of Me*. Out of all the indicators, “When I do not fully understand something, I ask other course members in this online course for ideas” got the highest weighted mean of 5.75 with an adjectival rating of *True of Me*. One positive aspect brought by online learning is enhancing peer learning which was stated by Guvenc (2011) in this study. According to him, there are positive effects of cooperative learning when supported with reflection materials. When students are self-regulated, they tend to interact with their peers to share their thoughts and experiences which enable them to reflect, criticize, and

evaluate what they and their peers know and still need to know. However, the indicator with the lowest weighted mean of 5.04 is “I am persistent in getting help from the instructor of this online course.” This strongly suggests that educators must have the ability to cultivate learners who are self-regulated since it is tied to teachers’ own self-regulation (Michalsky & Schechter, 2013). Self-regulation does not happen naturally, but it should be supported by facilitation (Petty, 2013). Hence, this can be only feasible when there is a strong teacher-student relationship since Hocevar (2007) determined that there is a relationship between a teacher’s own learning behaviour and their practices in class.

Table 6: Respondents’ Achievement Goals

Indicators	WM	SD	VI
1. My aim is to completely master the material presented in class.	5.854	1.0772	True to Me
2. I am striving to do well compared to other students in this course.	5.5	1.2233	True to Me

3. My goal is to learn as much as possible in class.	6.194	1.1664	True to Me
4. My aim is to perform well relative to other students in this class.	5.847	1.1301	True to Me
5. My aim is to avoid learning less than I possibly could in this course.	5.368	1.4375	Somewhat True to Me
6. My goal is to avoid performing poorly compared to others in class.	5.687	1.1616	True to Me
7. I am striving to understand the content of this course as thoroughly as possible.	5.924	1.0649	True to Me
8. My goal is to perform better than the other students in this class.	5.389	1.2353	Somewhat True to Me
9. My goal is to avoid learning less than it is possible to learn in this class.	5.444	1.2943	Somewhat True to Me
10. I am striving to avoid performing worse than others in this class.	5.604	1.1295	True to Me
11. I am striving to avoid an incomplete understanding of the course material.	5.757	1.1172	True to Me
12. My aim is to avoid doing worse than other students in this course.	5.806	1.0329	True to Me
COMPOSITE MEAN	5.6979	0.91372	True to me

Legend: 6.50 – 7.00 = Very True of Me; 5.50 – 6.49 = True of Me; 4.50 – 5.49 = Somewhat True of Me; 3.50 – 4.49 = Neutral; 2.50 – 3.49 = Somewhat Untrue to Me; 1.50 – 2.49 = Untrue to Me; 1.00 – 1.49 = Very Untrue to Me

Based on the results shown in Table 6, the level of extent in respondents' achievement goals obtained a composite mean of 5.70 with an adjectival rating of *True to Me*. Out of all the indicators, the indicator "My goal is to learn as much as possible in class" in terms of Mastery Approach got the highest weighted mean of 6.20, indicating *True to Me*. This result strongly implied autonomous learning on the part of the students. Even Slay (2007) mentioned in this study that students must be innately motivated to learn so they can acquire lifelong skills. Moreover, this was followed by the indicator under Mastery Approach "I am striving to understand the content of this course as thoroughly as possible" with the weighted mean of 5.92 and got the adjectival rating of *True to Me*. On the other hand, the indicator which got the lowest weighted mean of 5.37 and with the adjectival rating of *Somewhat True to Me* is "My aim is to avoid learning less than I possibly could in this course" under Mastery Avoidance. This denotes that the respondents highly regarded online learning of the course material as significantly contributory towards academic success. This is congruent with the study of Broadbent and Poon (2015) who found that use of SRL strategies, particularly metacognition and critical thinking, led to higher academic achievement.

Table 7: Significant Relationship between the Respondents' Self-Regulated Online Learning Skills and their Achievement Goals

Self-Regulated Online Learning Skills	Pearson r Value	p-value	Decision to H ₀	Interpretation
Metacognitive Skills	0.784	0.000	Reject H ₀	Significant
Time Management Skills	0.344	0.000	Reject H ₀	Significant
Environmental Structuring	0.658	0.000	Reject H ₀	Significant
Persistence	0.677	0.000	Reject H ₀	Significant
Help Seeking	0.515	0.000	Reject H ₀	Significant
p<0.05	Significant			

As shown in Table 7, the results demonstrate a significant and positive relationship between respondents' self-regulated online learning skills and their achievement goals. The Pearson correlation coefficients (r values) for metacognitive skills, time management skills, environmental structuring, persistence, and help-seeking are all notably above zero, indicating positive correlations. Additionally, all the associated p-values are extremely low (0.000), which implies a strong level of confidence in the statistical significance of these relationships. Furthermore, metacognitive skills appear to exhibit the strongest correlation (r = 0.784) with achievement goals,

followed by persistence (r = 0.677), environmental structuring (r = 0.658), help-seeking (r = 0.515), and time management skills (r = 0.344). These findings suggest that individuals who possess better metacognitive skills, such as self-awareness, goal setting, and self-monitoring, tend to have higher achievement goals. The results also highlight the importance of other self-regulated skills like environmental structuring, persistence, and help-seeking in shaping the level of one's achievement goals.

Table 8: Self-Regulated Online Learning Skills that Predict the Pre-Service Teachers Achievement Goals

Self-Regulated Online Learning Skills	t value	p-value	Decision to H ₀	Interpretation
Metacognitive Skills	6.379	0.000	Reject H ₀	Significant
Time Management Skills	-0.206	0.837	Accept H ₀	Not Significant
Environmental Structuring	0.189	0.850	Accept H ₀	Not Significant
Persistence	1.515	0.132	Accept H ₀	Not Significant
Help Seeking	1.443	0.151	Accept H ₀	Not Significant
p<0.05	Significant			

Table 8 shows the results obtained from the linear regression analysis which provide valuable insights of the relationship between various self-regulated online learning skills and the achievement goals of pre-service teachers. Based on the findings, the t-value of 6.379 and a very low p-value of 0.000 indicate a highly significant and positive relationship between metacognitive skills and pre-service teachers' achievement goals. This suggests that pre-service teachers with strong metacognitive skills are more likely to have higher achievement goals. Metacognitive skills involve self-awareness, goal setting, and self-monitoring, which are crucial for effective learning and goal attainment. The strong significance of this relationship underscores the importance of nurturing metacognitive skills in pre-service teachers to enhance their academic ambitions and achievement.

In contrast, the t-values for time management skills, environmental structuring, persistence, and help-seeking are low, and the associated p-values are relatively high. These results suggest that these skills do not significantly predict the achievement goals of pre-service teachers. In other words, there is insufficient evidence to conclude that these skills have a substantial impact on pre-service teachers' aspirations and goals. While these skills may still be valuable for effective online learning, the analysis suggests

that they may not strongly influence the specific outcome of achievement goals in the context of pre-service teachers.

Conclusively, the linear regression analysis reveals that metacognitive skills are a significant predictor of pre-service teachers' achievement goals, while the other self-regulated online learning skills (time management, environmental structuring, persistence, and help-seeking) do not have a statistically significant influence on these goals. These findings highlight the unique role of metacognitive skills in shaping the aspirations and ambitions of pre-service teachers and can inform educational interventions and curriculum development to foster these skills for improved goal attainment in this group.

Conclusion

This study assessed the online self-regulated skills of students who are enrolled in teacher education program. The findings of this study showed how education students positively responded to the demands of the 21st C education through dynamically engaging themselves in online learning. Thus, the acquisition of online self-regulated learning skills is deemed a pivotal factor in broadening and enhancing pre-service teachers' knowledge and experiences for positive learning even amid the pandemic.

Recommendation

The findings of this study only reflected self-assessment of pre-service teachers' online self-regulated learning. Results showed that to help student-teachers strengthen their online learning experiences, technological advancements must be coupled with effective teachers' facilitation techniques and interaction with their students. Further studies concerning the use of different media, enhancing pre-service teachers' metacognitive skills, and other factors that lead towards teachers' facilitation and actualization of learners' achievement goals may be explored to discover potential online learning resources and teaching strategies that can be utilized to foster effective and transformative online learning environs.

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