# Self-regulation among state university students in an online learning environment

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**ABSTRACT:** A state university in the Philippines participated in the resumption of limited face-to-face classes after two years of closure due to the COVID-19 pandemic, thereby allowing for online learning. This study assessed the online self-regulated learning strategies of college students using descriptive-correlational research design. Mean, standard deviation, Mann-Whitney U-test, and Kruskal-Walli's test were used for analyzing data gathered from one hundred sixty-three students. Results show that students had a high level of online self-regulated learning strategies when they were taken as a whole and grouped according to sex and year level, excluding the second-year students whose level was average. Moreover, significant differences did not exist in their online self-regulated learning strategies when grouped according to year level, but a significant difference did in environment structuring when they were grouped according to sex. Overall, the students succeeded in dealing with the challenges of online learning because they employed self-regulated strategies.

**KEYWORDS:** descriptive-correlational, online learning, Philippines, self-regulation, state university

## INTRODUCTION

The COVID-19 pandemic has impacted many areas, including education (Mahmud & German, 2021). Universities were forced to switch from in-person to online instruction, forcing college students to engage in self-regulated learning (Biwer et al., 2021). The Philippine educational system has been significantly affected by this sudden transition. Consequently, educators and the new system require students to get used to it. Students have had to use various strategies to keep up with their classes.

Online learning has become one of the most popular ways to learn during the COVID-19 pandemic. Learning after schools closed was linked to increasing student autonomy and accountability. Due to the shutdown of schools, several components that helped structure learning were gone, which made it harder for students to organize themselves (Helm & Huber, 2022). Technology plays a big part in online learning. Only some students may have access to the most recent software and hardware and have a good internet connection (Lopena, Padilla, & Madrigal, 2021). Therefore, students who engage in online learning must develop and practice self-regulation to become proactive in their learning amidst challenges.

Zimmerman (2002) defined *self-regulation* as the self-directed process by which students develop their intellectual capacities into academic competencies. Barnard-Brak, Lan, and Paton (2010) held that individuals who exhibit self-regulated learning behaviors appear to achieve more favorable academic outcomes than those who do not. To Vishwakarma and Tyagi (2022), self-regulated individuals can control their learning and actively participate in achieving their academic goals. Zimmerman's (2002) SRL goes beyond depending on highly specialized expertise but instead requires behavioral skills, self-motivation, and self-awareness to effectively harness that knowledge (Triquet et al., 2017).

Studies like those of Barak et al. (2016), Zhao and Chen (2016), Martinez-Lopez et al. (2017), Pedrotti and Nistor (2019), Carter et al. (2020), Alhazbi and Hasan (2021), Bylieva et al. (2021), Mou (2021), Al-Hawamleh et al. (2022), Makhno et al. (2022), Bebas et al. (2022), Santoso et al. (2022), Mindrila and Cao (2022), and Xu (2022) delved into self-regulation in online learning; however, only a few had Bachelor of Arts in English Language students as their participants or utilized the online self-regulated learning questionnaire in this study. Hence, it was considered gainful to conduct this study to find out the levels of the Bachelor of Arts in English Language students' online self-regulation learning strategies and to determine whether significant differences existed when they were grouped according to sex and year level.

## FRAMEWORK OF THE STUDY

This study is based on the Self-regulation theory of Zimmerman (2002), which holds that self-regulation involves learners using their mental abilities to develop academic skills. Instead of being a passive response to teaching, learning is seen as a proactive activity that students undertake independently. Self-regulated students know their strengths and limitations and use personally set goals and strategies to guide their learning. These students monitor their progress toward their goals and reflect on their progress,

**Self-regulation among state university students in an online learning environment**

which boosts their self-satisfaction and motivation to continue improving their learning methods. Self-regulated students tend to be more successful academically and optimistic about their future, thanks to their prime motivation and adaptive learning strategies.

Furthermore, this study zeroed in on the online self-regulated learning of college students by espousing the idea that self-regulation strategies can help students enhance their learning by establishing clear objectives for themselves and tracking their advancement based on those objectives and strategies. The online self-regulated learning questionnaire of Barnard-Brak et al. (2010) was utilized to determine college students' self-regulated learning in an online learning environment. The questionnaire comprises six subscale constructs: goal setting, environment structuring, task strategies, time management, and help-seeking. Barnard-Brak et al. (2010) claimed that those self-regulated learning skills and strategies could contribute to theory development by clarifying how individuals demonstrate self-regulation in their learning.

Figure 1 shows that the levels of the college students' online self-regulated learning strategies in terms of goal setting, environment structuring, task strategies, time management, help-seeking, and self-evaluation may depend on the respondents' sex and year level.
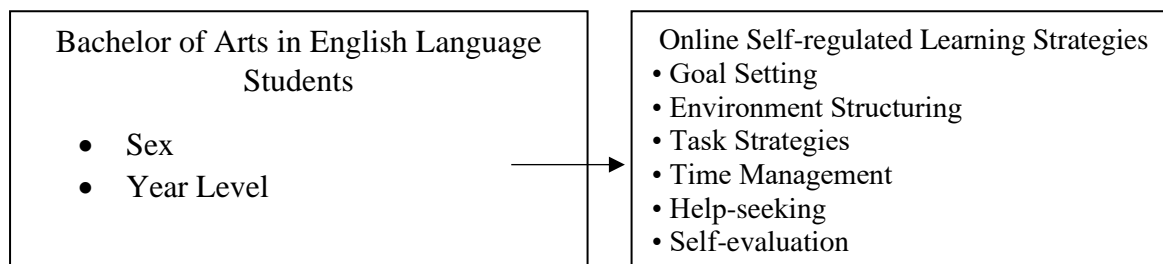


**Figure 1. Paradigm of the Study**

Barnard-Brak et al. (2010) included the following six subscale constructs in their Online Self-regulated Learning Questionnaire:

**Goal setting:** This includes setting standards for assignments in online courses, setting short-term (daily or weekly) goals as well as long-term goals (monthly or for the semester), maintaining high standards for learning in online courses, setting goals to manage study time for online classes, and not compromising the quality of work because it is online.

**Environment structuring:** This involves choosing a location to study that avoids too many distractions, finding a comfortable place to study, knowing where to study most efficiently for online courses, and selecting a time with few distractions to study for online courses.

**Task strategies:** This consists of taking more thorough notes for online courses because notes are even more critical for learning online than in a regular classroom, reading instructional materials posted online aloud to fight against distractions, preparing questions before joining discussion forums, and working extra problems in online courses in addition to the assigned ones to master the course content.

**Time management:** This involves allocating extra studying time for online courses that demand time, trying to schedule the same time every day or every week to study for online courses, and observing the schedule, still trying to distribute studying time evenly across days even though there is no need to attend daily classes.

**Help-seeking:** This includes finding someone knowledgeable in the course content, sharing problems with classmates online, trying to meet classmates face-to-face if needed, and being persistent in getting help from the instructor through e-mail.

**Self-evaluation:** This involves summarizing what I learned in online courses to examine my understanding of what was learned, asking myself many questions about the course material when studying for an online course, communicating with classmates to find out how I am doing in my online classes, and communicating with classmates to find out what is different from what they are learning.

## METHODOLOGY

This study is descriptive correlational quantitative research. Quantitative research involves analyzing the relationship between variables to test objective theories. These variables can be measured through instruments, which generate numerical data that can be analyzed using statistical procedures (Creswell, 2009). According to Nassaji (2015), descriptive research depicts a phenomenon and its attributes. Correlational design is advantageous when examining the co-variation of two variables, assessing the degree of correlation between variables, and determining causality between variables, especially when it is not feasible or ethical to manipulate any of the variables (McCombes, 2019).

Using the stratified sampling teaching, 163 Bachelor of Arts in English Language students in a state university participated, dividing the population into strata. Stratified sampling is utilized when the population lacks a homogeneous group from which the

sample can be drawn. This technique is commonly employed to obtain a representative and high-quality sample (Etikan & Bala, 2017). In particular, 47 first-year, 27 second-year, 43-third-year, and 46-fourth-year students participated in this study. This study adopted the 24-item Online Self-regulated Learning Questionnaire (OSLQ) of Barnard et al. (2009). It was subjected to reliability testing among Bachelor in Secondary Education major in English students before it was administered to the respondents of this study. Cronbach's Alpha established an alpha value of 0.720 at a 0.05 confidence level. Therefore the 24-item Online Self-regulated Learning Questionnaire (OSLQ) is reliable.

**RESULTS AND DISCUSSION**
**Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language students as a Whole and in Terms of Goal Setting, Environment Structuring Task Strategies, Time Management, Help-seeking, and Self-Evaluation**
The overall mean was 3.87, and the standard deviation was 0.37, which is interpreted as high. This result implies that all the 163 Bachelor of Arts in English Language students utilized goal-setting, environment structuring, task strategies, time management, help-seeking, and self-evaluation as their online self-regulated learning strategies to a great extent to address the demands of online learning. Table 1 has the data.

In support of the results, Mindrila and Cao (2022) revealed that students had high levels of online self-regulated learning strategies in terms of goal setting, environment structuring, task strategies, time management, help-seeking, and self-evaluation. Moreover, Santoso et al. (2022) and Martinez-Lopez et al. (2017) found that students had high levels of online self-regulated learning strategies but only in goal setting, environment structuring, and self-evaluation. On the contrary, Bylieva et al. (2021) found that goal setting and time management were the lowest self-regulation indicators.

Additionally, Yen et al. (2016) found that when considering the group as a whole, participants exhibited higher levels of self-regulation in environment structuring and goal setting. However, their self-regulation was comparatively weaker in areas such as time management, task strategies, help seeking, and self-evaluation.

**Table 1. Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language students as a whole and in terms of goal setting, environment structuring, task strategies, time management, help-seeking, and self-evaluation**

| Areas | M | SD | Interpretation |
|---|---|---|---|
| Goal Setting | 3.81 | 0.54 | High |
| Environment Structuring | 4.28 | 0.53 | High |
| Task Strategies | 3.64 | 0.57 | High |
| Time Management | 3.86 | 0.52 | High |
| Help-seeking | 3.73 | 0.62 | High |
| Self-evaluation | 3.90 | 0.48 | High |
| *Whole* | *3.87* | *0.37* | *High* |

**Mean Scale:** 1.00-1.49 Very low, 1.50-2.49 Low, 2.50-3.49 Average, 3.50-4.49 High, and 4.50-5.00 Very high

**Level of Online-Self-regulated Learning Strategies of Bachelor of Arts in English Language Students When Grouped According to Sex and Year Level**
Generally, all students, when grouped according to sex and year level, had a high level of online self-regulated learning strategies. This result indicates that they were involved with a plan of action to monitor and manage their behaviors in the pursuit of their goals. Notably, the male students (M=3.90, SD=3.86) and the fourth-year students (M=3.92, SD=0.40) were more interested in online self-regulated learning than the female students (M=3.86, SD=0.32), first-year (M=3.89, SD=0.39), second-year (M=3.73, SD=0.40), and third-year (M=3.89, SD=0.29) students. Table shows the data.

Zhao and Chen (2016) found that male students had higher self-regulation than female students. Mou (2021) discovered that senior undergraduate students took self-regulation more seriously than their counterparts.

**Table 2. Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language students when grouped according to sex and year level**

| Variables | N | M | SD | Interpretation |
|---|---|---|---|---|
| Sex | | | | |
| Female | 104 | 3.86 | 0.32 | High |
| Male | 59 | 3.90 | 0.45 | High |
| Year Level | | | | |
| First | 47 | 3.89 | 0.39 | High |
| Second | 27 | 3.73 | 0.40 | High |

| | | | | |
|---|---|---|---|---|
| Third | 43 | 3.89 | 0.29 | High |
| Fourth | 46 | 3.92 | 0.40 | High |

**Mean Scale:** 1.00-1.49 Very low, 1.50-2.49 Low, 2.50-3.49 Average, 3.50-4.49 High, and 4.50-5.00 Very high

**Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language Students When Grouped According to Sex and Year Level and in Terms of Goal Setting**

In general, the students' level of goal setting as an online self-regulated learning strategy was high, notwithstanding sex and year level. Table 2, however, shows that the male students were more bent on setting goals (M=3.86, SD=0.53) than the female students (M=3.79, SD=0.53). Furthermore, the fourth-year students had a higher level of goal setting (M=3.90, SD=0.48) than the first-year (M=3.72, SD=0.63), second-year (M=3.76, SD=0.49), and third-year (M=3.86, SD=0.51) students. These results indicate that the fourth-year students considered taking proactive measures to attain their desired outcomes more seriously than their counterparts. Table 3 presents the data.

Correspondingly, setting goals enables students to stay focused on their desired outcomes and provides them with a clear pathway to success (Dotson, 2016). Furthermore, when students set goals, they are motivated to independently employ effective learning strategies and assume responsibility for their learning endeavors, leading to enhanced academic achievements (Haq, A.H.B. et al., 2021).

**Table 3. Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language students in terms of goal setting when grouped according to sex and year level**

| Variables | N | M | SD | Interpretation |
|---|---|---|---|---|
| Sex | | | | |
| Female | 104 | 3.79 | 0.53 | High |
| Male | 59 | 3.86 | 0.57 | High |
| Year Level | | | | |
| First | 47 | 3.72 | 0.63 | High |
| Second | 27 | 3.76 | 0.49 | High |
| Third | 43 | 3.86 | 0.51 | High |
| Fourth | 46 | 3.90 | 0.48 | High |

**Mean Scale:** 1.00-1.49 Very low, 1.50-2.49 Low, 2.50-3.49 Average, 3.50-4.49 High, and 4.50-5.00 Very high

**Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language Students When Grouped According to Sex and Year Level and in Terms of Environment Structuring**

The data show that the level of online self-regulated learning strategies of students when grouped according to sex and year level and in terms of environment structuring was high. In particular, the female students (M=4.36, SD=0.52) and the third-year students (M=4.37, SD=0.44) exhibited high preference for looking at how physical environments may be arranged to enhance learning more than the male students (M=4.15, SD=0.54) and first-year (M=4.30, SD=0.52), second-year (M=4.12, SD=0.67), and fourth-year (M=4.27, SD=0.52) students. Table 4 shows the data.

Yen et a. (2016) showed that 43 male and 61 female participants in the group taking online courses at a university in the United States demonstrated elevated levels of self-regulation in environment structuring when evaluated collectively. Moreover, in an English preparatory class at a state university in Turkey, 74 male and 16 female students identified structuring their studying environment as the most commonly employed online self-regulation strategy (Karacan et al., 2022).

**Table 4. Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language students in terms of environment structuring when grouped according to sex and year level**

| Variables | N | M | SD | Interpretation |
|---|---|---|---|---|
| Sex | | | | |
| Female | 104 | 4.36 | 0.52 | High |
| Male | 59 | 4.15 | 0.54 | High |
| Year Level | | | | |
| First | 47 | 4.30 | 0.52 | High |
| Second | 27 | 4.12 | 0.67 | High |
| Third | 43 | 4.37 | 0.44 | High |
| Fourth | 46 | 4.27 | 0.52 | High |

**Mean Scale:** 1.00-1.49 Very low, 1.50-2.49 Low, 2.50-3.49 Average, 3.50-4.49 High, and 4.50-5.00 Very high

**Self-regulation among state university students in an online learning environment**

**Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language Students When Grouped According to Sex and Year Level and in Terms of Task Strategies**

When grouped according to sex, all male (M=3.71, SD=0.65) and female (M=3.61, SD=0.52) students and first-year (M=3.67, SD=0.61), third-year (M=3.65, SD=0.46), and fourth-year (M=3.75, SD=0.52) students strongly believed that managing their tasks could be helpful as all of them displayed a high level of online self-regulated learning in terms of task strategies. The second-year students (M=3.43, SD=0.69) whose level of task strategies was just average, however, could have not considered employing tasks strategies as much as their counterparts did. Table 5 indicates the data.

It is noteworthy that the male students and the fourth-year students regarded task strategies more useful than the female and first-year, second-year, and third-year students, respectively. Li et al. (2018) discovered that their respondents took to heart task strategies in self-regulation. On the contrary, Yen et al. (2016) revealed that their all their participants had weak self-regulation in task strategies.

**Table 5. Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language students in terms of task strategies when grouped according to sex and year level**

| Variables | N | M | SD | Interpretation |
|---|---|---|---|---|
| Sex | | | | |
| Female | 104 | 3.61 | 0.52 | High |
| Male | 59 | 3.71 | 0.65 | High |
| Year Level | | | | |
| First | 47 | 3.67 | 0.61 | High |
| Second | 27 | 3.43 | 0.69 | Average |
| Third | 43 | 3.65 | 0.46 | High |
| Fourth | 46 | 3.75 | 0.52 | High |

**Mean Scale:** 1.00-1.49 Very low, 1.50-2.49 Low, 2.50-3.49 Average, 3.50-4.49 High, and 4.50-5.00 Very high

**Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language Students When Grouped According to Sex and Year Level and in Terms of Time Management**

Table 5 shows that when classified into sex and year level, all students had a high level of online self-regulated learning in respect of time management. This result indicates that all students regarded time management as an important self-regulated learning strategy. Specifically, the male students (M=3.95, SD=0.53) and the fourth-year students (M=3.94, SD=0.55) were more determined to arrange and strategize how to allocate their time among various activities than the female students (M=3.80, SD=0.51), first-year (M=3.89, SD=0.51), second-year (M=3.64, SD=0.60), and third-year (M=3.85, SD=0.44). Table 6 presents the data.

In like manner, Filho et al. (2015) divulged that to students, time management was essential for accomplishing learning tasks. Conversely, Yen et al. (2016) found that their participants who were university students had a weak self-regulation in time management.

According to the study conducted by Nigussie (2019), the results indicate that a considerable proportion of students (35%) achieved a moderate level of time management skills, while another 35% demonstrated a high level. Regarding gender differences, the study revealed that male students had higher scores (mean score=55.72) in time management than their female counterparts (50.5). However, students in different academic years observed no significant variation in overall time management scores.

**Table 6. Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language students in terms of time management when grouped according to sex and year level**

| Variables | N | M | SD | Interpretation |
|---|---|---|---|---|
| Sex | | | | |
| Female | 104 | 3.80 | 0.51 | High |
| Male | 59 | 3.95 | 0.53 | High |
| Year Level | | | | |
| First | 47 | 3.89 | 0.51 | High |
| Second | 27 | 3.64 | 0.60 | High |
| Third | 43 | 3.85 | 0.44 | High |
| Fourth | 46 | 3.94 | 0.55 | High |

**Mean Scale:** 1.00-1.49 Very low, 1.50-2.49 Low, 2.50-3.49 Average, 3.50-4.49 High, and 4.50-5.00 Very high

**Self-regulation among state university students in an online learning environment**

**Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language Students When Grouped According to Sex and Year Level and in Terms of Help-seeking**

Generally, all students had a high level of online self-regulated learning as with respect to help-seeking. This result suggests all of them considered obtaining external assistance to a great extent. Still and all, the male students (M=3.83, SD=0.67), third-year students (M=3.74, SD=0.61), and fourth-year students (M3.74, SD=0.72) treated help-seeking as being very important more than the female students (M=3.68, SD=0.58), first-year students (M=3.80, SD=0.53), and second-year students (M=3.59, SD=0.59). Table 7 presents the data.

Aguiar and da Silva (2019) and Papageorgiou (2022), revealed that their participants reckoned help-seeking valuable in achieving academic goals. On the contrary, Yen et al. (2016) revealed that students at a university in the United States exhibited limited self-regulation when it came to seeking help.

**Table 7. Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language students in terms of help-seeking when grouped according to sex and year level**

| Variables | N | M | SD | Interpretation |
|---|---|---|---|---|
| Sex | | | | |
| Female | 104 | 3.68 | 0.58 | High |
| Male | 59 | 3.83 | 0.67 | High |
| Year Level | | | | |
| First | 47 | 3.80 | 0.53 | High |
| Second | 27 | 3.59 | 0.59 | High |
| Third | 43 | 3.74 | 0.61 | High |
| Fourth | 46 | 3.74 | 0.72 | High |

**Mean Scale:** 1.00-1.49 Very low, 1.50-2.49 Low, 2.50-3.49 Average, 3.50-4.49 High, and 4.50-5.00 Very high

**Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language Students When Grouped According to Sex and Year Level and in Terms of Self-evaluation**

On the whole, all students had a high level of online self-regulated learning as regards self-evaluation. This result implies that all students gave particular importance to checking out themselves or their actions. Particularly, the female students (M=3.90, SD=0.43) and first-year (M=3.94, SD=0.53) were into self-evaluation more than the male students (M=3.89, SD=0.57), second-year students (M=3.86, SD=0.38), third-year students (M=3.92, SD=0.58), and fourth-year students (M=3.84, SD=0.37). Table 8 shows the data.

By the same token, Li et al. (2018) found that Chinese students practiced self-evaluation (and task strategies) more than the other self-regulated learning strategies. In contrast, Yen et al. (2016) showed that university students had a weak self-regulation in self-evaluation.

**Table 8. Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language students in terms of self-evaluation when grouped according to sex and year level**

| Variables | N | M | SD | Interpretation |
|---|---|---|---|---|
| Sex | | | | |
| Female | 104 | 3.90 | 0.43 | High |
| Male | 59 | 3.89 | 0.57 | High |
| Year Level | | | | |
| First | 47 | 3.94 | 0.53 | High |
| Second | 27 | 3.86 | 0.38 | High |
| Third | 43 | 3.92 | 0.58 | High |
| Fourth | 46 | 3.84 | 0.37 | High |

**Mean Scale:** 1.00-1.49 Very low, 1.50-2.49 Low, 2.50-3.49 Average, 3.50-4.49 High, and 4.50-5.00 Very high

**Difference in the Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language Students in Terms of Goal setting, Environment Structuring, Task Strategies, Time Management, Help-seeking, and Self-evaluation When Grouped According to Sex**

Utilizing the Mann-Whitney U-test, no significant difference in the online self-regulated learning strategies of the students was gleaned when they were grouped according to sex [U = 3019.50, p = 0.87] at a 0.05 level of significance. Furthermore, there was also no significant difference in the online self-regulated learning strategies when the students were grouped according to sex in terms of the areas of goal setting [U = 2798.50, p = 0.35], task strategies [U = 2875.00, p = 0.50], time management [U = 2547.50,

**Self-regulation among state university students in an online learning environment**

p = 0.06], help-seeking [U = 2716.50, p = 0.22] and self-evaluation [U = 3089.50, p = 0.87] at a 0.05 level of significance. Table 9 presents the data.

These findings suggest that students, irrespective of gender, exhibited similar levels of online self-regulated learning strategies concerning goal setting, task strategies, time management, help-seeking, and self-evaluation, with the exception of environment structuring.

**Table 9. Difference in the Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language students in terms of areas when grouped according to sex**

| *Variables* | *U* | *p* | *Interpretation* |
|---|---|---|---|
| Goal Setting | 2798.50 | 0.35 | Not significant |
| Environment Structuring | 3724.50 | 0.02 | Significant |
| Task Strategies | 2875.00 | 0.50 | Not significant |
| Time Management | 2547.50 | 0.06 | Not significant |
| Help-seeking | 2716.50 | 0.22 | Not significant |
| Self-evaluation | 3089.50 | 0.94 | Not significant |
| *Self-regulated* | *3019.50* | *0.87* | *Not significant* |

**Difference in the Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language Students in Terms of Goal setting, Environment Structuring, Task Strategies, Time Management, Help-seeking, and Self-evaluation When Grouped According to Year Level**

Utilizing the Kruskal-Walli's test, table 10 shows that there was no significant difference in the level of online self-regulated learning strategies when the students were grouped according to year level [$X2(3) = 3.10$, p = 0.38] at a 0.05 level of significance. Moreover, results also show that there was no significant difference in the level of online self-regulated learning strategies when the students were grouped according to year level in terms of goal setting [$X2(3) = 4.29$, p = 0.23], environment structuring [$X2(3) = 3.20$, p = 0.36], task strategies [$X2(3) = 3.78$, p = 0.29], time management [$X2(3) = 4.16$, p = 0.25], help-seeking [$X2(3) = 2.37$, p = 0.50], and self-evaluation [$X2(3) = 0.91$, p = 0.82] at a 0.05 level of significance.

These results indicate that year level did not influence the students' levels of online self-regulated learning strategies.

**Table 10. Difference in the Level of Online Self-regulated Learning Strategies of Bachelor of Arts in English Language students in terms of areas when grouped according to year level**

| *Variables* | *$X^2$* | *df* | *p* | *Interpretation* |
|---|---|---|---|---|
| Goal Setting | 4.29 | 3 | 0.23 | Not significant |
| Environment Structuring | 3.20 | 3 | 0.36 | Not significant |
| Task Strategies | 3.78 | 3 | 0.29 | Not significant |
| Time Management | 4.16 | 3 | 0.25 | Not significant |
| Help-seeking | 2.37 | 3 | 0.50 | Not significant |
| Self-evaluation | 0.91 | 3 | 0.82 | Not significant |
| *Self-regulated* | *3.10* | *3* | *0.38* | *Not significant* |

**CONCLUSION**

Overall, when students pursuing a Bachelor of Arts in English Language were categorized by sex and year level, they displayed high levels of online self-regulated learning strategies in goal setting, environment structuring, task strategies, time management, help-seeking, and self-evaluation. This result suggests that they took self-regulation seriously in their online classes. Notably, no significant differences were observed when students were grouped by year level. However, a significant difference was found when students were categorized by sex and environment structuring, indicating that gender influenced the students' levels of online self-regulated learning strategies, specifically regarding environment structuring. In conclusion, year level did not impact the students' levels of online self-regulated learning strategies. However, gender did, with a notable disparity in the levels of environment structuring between male and female students.

The results of this study suggest that self-regulated students can successfully navigate challenges in online learning. However, it is essential to note that this study focused solely on online self-regulated learning of Bachelor of Arts in English Language students. Future researchers may explore self-regulation among students from different degree programs, employ alternative self-regulation questionnaires, or investigate self-regulated learning in face-to-face classes.

**Self-regulation among state university students in an online learning environment**

## REFERENCES

1) Aguiar, J.H. & da Silva, A.C.R. (2019). Demographic and academic analysis of self-regulated learning in accounting students from HEI in Salvador. *Journal of Education and Research in Accounting, Volume 3*(2), pp. 139-156.

2) Al-Hawamleh, M., Alazemi, A., Al-Jamal, D., Al Shdaifat, S., & Gashti, Z. R. (2022). Online learning and self-regulation strategies: Learning guides matter. *Education Research International*

3) Alhazbi, S. & Hasan, M. (2021). The role of self-regulation in remote emergency learning: Comparing synchronous and asynchronous online learning. *Sustainability 2021, 13*(19), 11070

4) Barak, M., Hussein-Farraj, R., & Dori, Y. J. (2016). On-campus or online: examining self-regulation and cognitive transfer skills in different learning settings. *International Journal of Educational Technology in Higher Education, Volume 13*(35)

5) Barnard-Brak, L., Lan, W., & Paton, O. (2010). Profiles in self-regulated learning in the online learning environment. *International Review of Research in Open and Distance Learning, Volume 11*(1)

6) Bebas, H., Boyboy, M.j., Castro, M., Leibik, L.R., Magbanua, D., Opeña, A., & Pineda, J. (2022). Investigating the self-regulated online learning strategies of Bachelor of Arts in English Language Students. *Globus Journal of Progressive Education, Volume 12*(2)

7) Biwer, F. et al. (2021). Changes and adaptations: How university students self-regulate their online learning during the COVID-19 pandemic. *Sec. Educational Psychology, Volume 12*.

8) Bylieva, D. Hong, J.C., Lobatyuk, V., & Nam, T. (2021). Self-regulation in e-learning environment. Educ. *Sci. 2021, 11*(12), 785

9) Carter Jr., R.A., Rice, M., Yang, S., & Jackson, H. (2020). Self-regulated learning in online learning environments: strategies for remote learning. *Information and Learning Sciences.*

10) Creswell, J. (2009). *Research design qualitative, quantitative, and mixed methods approaches.* SAGE Publications.

11) Dotson, R. (2016). Goal setting to increase student academic performance. *Journal of School Administration Research and Development, Volume 1*(1) https://files.eric.ed.gov/fulltext/EJ1158116.pdf

12) Etikan, I., & Bala, K. (2017). Sampling and sampling methods. *Biometrics & Biostatistics International Journal, Volume 5*(6)

13) Filho, R. L., de Lima, G. A. S. F. & Bruni, A. L. (2020). Self-regulated learning in accounting diagnosis, dimensions and explanations. *BBR. Brazilian Business Review (English Edition. Online), Volume 12,* p. 36-54

14) Haq, A.H.B., Fahmi, G.L., Ghandi, P., Khatimah, K., Astiti, D.P., & Blegur, J. (2021). Goal setting for students participating in student exchange programs between universities in Indonesia. *Proceedings of the Interdisciplinary Conference of Psychology, Health, and Social Science (ICPHS 2021)*

15) Helm, C. & Huber, S.G. (2022). Predictors of central student learning outcomes in times of COVID-19: Students', parents' and teachers' perspectives during school closure in 2020-A multiple informant relative weight analysis. *Sec. Educational Psychology, Volume 7.*

16) Karacan, C. G., Yıldız, M., & Atay, D. (2022). The relationship between self-regulated learning and EFL achievement in synchronous online language education. *MEXTESOL Journal Volume 46*(3)

17) Li, J., Ye, H., Tang, Y., Zhou, Z., & Hu, Z. (2018). What are the effects of self-regulation phases and strategies for Chinese students? A meta-analysis of two decades research of the association between self-regulation and academic performance. *Sec. Educational Psychology, Volume 9*

18) Lopena, G., Padilla, N., & Madrigal, D. (2021). Walking through a maze: The struggles of accountancy students with online learning in the context of the COVID-19. *Philippine Social Science Journal, Volume 4*(3)

19) Mahmud, Y. S., & German, E. (2021). Online self-regulated learning strategies amid a global pandemic: Insights from Indonesian university students. *Malaysian Journal of Learning and Instruction, 18*(2), 45-68

20) Martinez-Lopez, R., Yot, C., Tuovila, I., & Rodriguez, V.H.P. (2017). Online self-regulated learning questionnaire in a Russian MOOC. *Computers in Human Behavior 75*(6), 966-974

21) McCombes, S. (2019). Correlational research. https://www.scribbr.com/methodology/correlational-researc

22) Mindrila, D. & Cao, L. (2022). Latent profiles of online self-regulated learning: Relationships with predicted and final course grades. *International Review of Research in Open and Distributed Learning, Volume 23*(3)

23) Mou, T. Y. (2021). Online learning in the time of COVID-19 crisis: Implications for the self-regulated learning of university design students. *Active Learning in Higher Education, 0*(0)

24) Nassaji, H. (2015). Qualitative and descriptive research: Data type versus data analysis. *Language Teaching Research 2015, Volume. 19*(2) 129 –132

25) Nigussie, T. (2019). The effect of time management practice on the academic achievement: A case of Dire Dawa University, Ethiopia. *European Journal of Business and Management, Volume 11*(4)

26) Papageorgiou, E. (2022). Self-regulated learning strategies and academic performance of accounting students at a South African university. *Afr. J. High. Educ., Volume 36*(1), pp.251-278.

27) Pedrotti, M. & Nistor, N. (2019). How students fail to self-regulate their online learning experience. In: Scheffel, M., Broisin, J., Pammer-Schindler, V., Ioannou, A., Schneider, J. (eds) Transforming learning with meaningful technologies. EC-TEL 2019. *Lecture Notes in Computer Science, Volume 11722.*

28) Santoso, H., Riyanti, R.D., Prastati, T., Triatmoko, H.S., Susanty, A., & Yang, M. (2022). Learners' online self-regulated learning skills in Indonesia Open University: *Implications for policies and practice. Educ. Sci. 2022, 12,* 469

29) Triquet, K., Peeters, J. & Lombaerts, K. (2017). Self-regulated learning online benefits, empirical foundations, multi-level and multi-modal promotion, and the evaluation thereof for teacher professional development. Contributing SRL Part to TeachUP. A policy experimentation co-funded by Erasmus+. Deliverable D1.1: Gaps in ITE and CPD provision report. Department of Educational Sciences, Vrije Universiteit Brussel

30) Vishwakarma, A. & Tyagi, N. (2022). Strategies for promoting self-regulation in online learning: An analytical review. *Journal of Positive School Psychology, Volume 6*(2), 4258 – 4271.

31) Xu, S. (2022). Adaptation to online learning and its impact on students' self-regulation development during the pandemic of COVID-19. In: A. Holl et al. (Eds.*): ICHESS 2022, ASSEHR 720,* pp. 2131–2138.

32) Yen, C., Tu, C., Sujo-Montes, L., & Sealander, K. (2016). A predictor for PLE management: Impacts of self-regulated online learning on students' learning skills. *Journal of Educational Technology Development and Exchange, 9*(1), 29-48

33) Zhao, H. & Chen, L. (2016). How can self-regulated learning be supported in e-learning 2.0 environment: A comparative study. *Journal of Educational Technology Development and Exchange, Volume 9*(2)

34) Zimmerman, B. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice, Volume 41*(2)