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THE INFLUENCE OF ENGLISH COLLEGE STUDENTS' LEARNING ENVIRONMENT AND SELF-DIRECTED LEARNING ON THEIR ACADEMIC ACHIEVEMENT

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Abstract. The current research aims to investigate the influence of English Language Education Department students' learning environment and self-directed learning towards their academic achievement. Moreover, it also investigates how the students' learning environment, self-directed learning, and academic achievement scores differ by their educational level. This research was an ex post facto research design. The participants involved in the current research were 106 consisted of 73 undergraduate students and 33 graduate students of the English Language Education Department at Yogyakarta State University. They were selected based on convenience sampling. This research adopted two instruments namely EFL Learning Environment Questionnaire (QEFL-LE) developed by Mutlu (2017) and Self-Directed Learning Scale (SDLS) questionnaire from Lounsbury et al. (2009). Before carrying out the investigation, a pilot study was conducted to improve the validity and reliability of the instruments. Furthermore, composite questionnaires were distributed, resulting in three quantitative data sets of students' learning environment, self-directed learning, and academic achievement. Finally, both descriptive and inferential statistics were performed using IBM SPSS to analyze the data. The findings reported that there were significant differences in the students' scores in learning environment, self-directed learning, and academic achievement based on their educational level (bachelor's and master's degree). In addition, the scores of master's degree students consistently surpassed those of bachelor's degree students in every variable in the current research. Furthermore, it confirms that students' academic achievement was significantly influenced by their learning environment and self-directed learning. Moreover, students' learning environment and self-directed are simultaneously become the best predictor of their academic achievement. Based on these findings, pedagogical implications are suggested for English teaching and learning in a higher education context.

Keywords**:** learning environment, self-directed learning, academic achievement, higher education, EFL

I. INTRODUCTION

In the present day, schools and institutions have recognized the significance of self-directed learning (SDL) as a crucial measure of academic achievement or learning outcome in the 21st century (Bergamin et al., 2019). In the 21st century, educators are required to be lifelong learners to effectively support their students' exploration of self-directed learning and autonomous thinking (Ozer & Yukselir, 2023). Brandt (2020) defined SDL as a process of students to identify their own learning needs. SDL empowers students to take responsibility for their learning process (Khalid et al., 2020). Students must evaluate their recent conditions, support networks, and study habits to be able to evaluate their learning process (Alfaifi, 2016). Every learning process needs an adaptive approach to reach the primary learning objective. A student's learning strategy consists of their conscientious thoughts and actions to reach a learning objective (Khabir, 2017). It means that to reach a high level of SDL, students also need to pay attention to their learning strategy.

According to Nguyen & Terry (2017), the usage of language learning strategy (LLS) reflects individual variations and tends to be continually formed and reformed by environmental and contextual variables. The complexities of LLS are influenced by various learning contexts and environment. Learning environment refers to everything that surrounds students while they are engaged in learning activities and that has meaning and effect on individuals (Usman & Madudili, 2019). According to Arigusman (2017), the quality of students' learning can be significantly influenced by the learning environment. Therefore, it is essential to create a comfortable learning environment, which implies that the learning environment may vary

depending on the location of the learning process. For example, Usman and Madudili (2019) argued that an essential aspect of an ideal educational setting is the presence of cleanliness, peace of mind, and a pleasant setting.

Furthermore, it is essential for students to prioritize the creation of an optimal learning environment to enhance their knowledge acquisition effectively (Murugan & Rajoo, 2013). It can be concluded that the environmental factors can influence the students' academic achievement. There are research findings demonstrate that the learning environment has an important role in students' academic achievement. For instance, Shamaki (2015) asserted that the academic achievement of students is influenced by the quality of the learning environment.

Academic achievement holds an important place in both education and the process of learning. Academic achievement is now recognized as an important indicator of students' potential in this highly competitive global environment (Illahi & Khandai, 2015). Kumar (2019) proposed that academic achievement refers to the actual level of performance or proficiency a someone has reached in a specific subject area, instead of their potential as evaluated by educational evaluations. Academic achievement in educational institutions is determined by a student's ability to meet the requirements established by the institution. According to Ozcan (2021), academic achievement has emerged as a fundamental and essential focus for educational institutions. Hence, while formulating their goals and objectives, education systems investigate academic achievement together with many other competences.

In general, the elements that can impact students' academic performance can be categorized into two primary areas such as individual student characteristics and external environmental factors (Zheng & Mustappha, 2022). Prior research has mainly focused on cognitive aspects rather than non-cognitive aspects (Ali & Hayat, 2019). In contrast, there have been few studies that have assessed the role of more non-intellectual factors.

Based on the research mentioned earlier, it can be inferred that there is a necessity to enhance the quantity of research on non-intellectual elements that impact the academic achievements of students in Indonesia, particularly in the setting of higher education. This is in line with statement made by Anggraini et al. (2018) who argued that there are also still few frameworks of universities performances measurements have been developed in Indonesia.

This research compares the different ways in which not only the intellectual factors that become the predictor of students' academic achievement, but also the non-intellectual factors. Hence, the objective of the research is to investigate the effect of the learning environment and self-directed learning on the academic achievement of students. The research was conducted at the English Language Education Department of Yogyakarta State University in Indonesia.

To address these issues, the present research attempts to examine the influence of students' learning environment and self-directed learning towards their academic achievement among English Language Education Department students at Yogyakarta State University. Thus, the research questions are framed as follows.

1) How does learning environment influence the students' academic achievement?
2) How does self-directed learning influence the students' academic achievement?
3) How do learning environment and self-directed learning influence the students' academic achievement?
4) How the students' learning environment, self-directed learning, and academic achievement scores differ by their educational level?

LITERATURE REVIEW

Learning Environment

Educational practitioners have acknowledged the significance of the classroom learning environment in the last two decades (Aldridge et al., 1999). According to Sulfemi (2018), learning is the acquisition of new skills or knowledge that occurs because of an individual's natural developmental process. While environment, according to Cronje (2020), is everything that exist outside of the social circle and affects the students' development such as climate, economic situation, food, clothes, neighbors, and other. To conclude, Baafi (2021) defined the learning environment as the overall atmosphere of an educational setting where academic activities take place. Nindiasari and Samad (2024) provided a definition of learning environment as the combined social and physical elements of the classroom that have an impact on the results of learning.

An appropriate learning environment is characterized by its ability to effectively engage and stimulate students, resulting in productive learning outcomes (Ali et al., 2020). Hapke et al. (2021) state that an effective learning environment should have three aspects of engagement: emotional, behavioral, and cognitive. Emotional involvement refers to the students' disposition towards learning, which influences their motivation to complete tasks and their overall emotional response to the learning environment. Behavioral engagement refers to the extent to which students exhibit appropriate conduct and remain focused on the subject at hand, actively participating in the learning process. Cognitive engagement is the act of applying mental effort to comprehend and acquire knowledge and abilities.

The academic achievement outcomes can serve as a significant indicator of the advantageous or adverse environment that directly impacts a student's academic performance, regardless of the time or place (Ali et al., 2016). It is crucial to extensively examine and analyze the process of academic achievement, considering many elements associated with it. Shamaki (2015) attributed the students' academic underachievement to the inadequate learning environment. Furthermore, this confirms that most experts believe that the quality of the learning environment plays a

crucial role in determining educational attainment or achievement.

Nwokedi (2023) argued that in the field of English language acquisition, the academic environment in which students learn has a substantial impact on how well they perform. A conducive classroom environment not only assists students to develop their language abilities but also has a significant impact on their motivation and engagement. A study revealed that the classroom setting exerts a substantial influence on the academic achievement of students in the English language. Factors such as the regular use of English at school and home, teacher-student ratios, teacher responsibilities, and the overall suitability of the classroom setting are crucial elements that can either enhance or impede the language learning ability and performance of English as a Second Language (ESL) learners (Wali et al., 2019). Furthermore, it suggested that the quality of education is closely connected to the efficient organization of the classroom environment, emphasizing the crucial impact a well-structured classroom has in fostering optimal learning results in English language (Li et al., 2022).

Self-directed Learning

Alfaifi (2016) presents different perspectives on the definition of Self-directed Learning (SDL), focusing on learner personality traits, motivation, and whether SDL is considered a distinct learning process or a combination of factors. According to Brockett and Hiemstra (2018), self-direction can be defined by two specific traits: (a) the learner's ongoing endeavor to retain control over all learning choices, and (b) the learner's capacity to access and choose from a diverse range of suitable and accessible resources. According to Knowles (1975), self-directed learning is the act of individuals taking on the responsibility of planning their own learning experiences, identifying their own needs, getting the necessary resources, and evaluating their own learning progress. Further, Guglielmino (1977) identified the attributes of self-directed learning readiness as the ability to take initiative, be independent, and persist in learning. This includes accepting responsibility for one’s own learning, having self-discipline, being curious, having the ability to learn independently, enjoying the process of learning, being goal-oriented, and perceiving problems as challenges rather than obstacles.

During the learning process, several learning environments naturally encourage different levels of self-directed learning. Asynchronous online learning allows students to have control over their study schedule, location, and methods. Additionally, the lecturer's course design can also influence it. Furthermore, the nature of the assignments influences the level of self-direction anticipated from the learners.

Currently, it is crucial for students to cultivate the capacity to engage in lifelong learning, both in their professional endeavors and academic interests. In the realm of higher education, students are expected to actively pursue direct learning (Khalid et al., 2020). In today’s world, students are required to adopt a mindset of lifelong learning, both in their professional endeavors and academic pursuits. Higher education requires students to prioritize direct learning. SDL, or self-directed learning, offers students the advantage of being able to effectively balance their work and study activities at the same time. SDL is a systematic approach that evaluates students' learning preferences, ensures their effective learning, directs them towards purposeful behaviors, and assesses their resultant knowledge.

The literature on SDL indicates that SDL emphasizes individual accountability for learning, the tackling of difficult challenges, preparedness for learning, and fundamental time management abilities. Avdal (2013) suggested that self-directed learners must possess the capacity to identify and delineate their learning objectives, select suitable learning materials, utilize efficient learning methodologies, and effectively manage their time in order to evaluate their progress.

According to Lounsbury et al. (2009), SDL cannot be isolated and evaluated as an independent variable, as it is strongly correlated with academic achievement. Several research have been undertaken to investigate the correlation between self-directed learning (SDL) and academic performance. SDL should be incorporated as a pedagogical methodology and incorporated into the training programs and curricula of teachers and lecturers to augment the process of teaching and learning.

Academic Achievement

The assessment of the academic achievement of learners is crucial in determining their standing within a university (Al Husaini & Shukor, 2022). Student achievement refers to the successful attainment of the goals outlined in the curriculum (Kazazoglu, 2013). According to Zheng and Mustappha (2022), academic achievement refers to a learner's performance in teaching and learning assessments, such as final examination scores, during their time in school. Academic achievement is commonly defined as the demonstration of information acquired or abilities cultivated in a certain educational subject (Zimmerman, 2013). The attainment of academic success by students has become a fundamental and essential objective of educational institutions, as well as a societal expectation. Hence, when education systems establish their aims and objectives, they examine academic accomplishment in conjunction with various competences (Ozcan, 2021).

Academic achievement is commonly equated with academic performance, and the standard metric used to assess the academic achievement of college students is GPA (grade point average). GPA is a precise calculation derived from the grades earned in each course, providing an accurate estimate of students' academic performance. The academic achievement indicator to be used in this research is in the form of GPA (Grade Point Average). Papadogiannis et al. (2023) outlined numerous benefits associated with utilizing GPA, including its simplicity (as it is represented by a single numerical value), objectivity (as it relies on quantitative data rather than subjective assessments), and universality (as it is widely employed, recognized, and comprehended globally). Furthermore, it is regarded as a reliable indicator of a

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student's accomplishments and their potential for future academic success.

According to Zhu (2016), academic achievement serves as a clear sign of students' learning progress and provides educators with a dependable means to evaluate the effectiveness of teaching and education in higher education institutions, as well as the overall development of students. Various factors have a significant impact on the academic performance of college students, and scholars have extensively investigated this issue. The elements that can impact students' academic performance can be categorized into two primary domains: individual student characteristics and external environmental factors (Zheng & Mustappha, 2022).

The characteristics of a student play a crucial part in creating successful learning experiences for all students, whether they are working in groups or individually (Sulkifli, 2021). These characteristics include the students' proficiency in conducting effective information retrieval for learning materials, how they can enhance motivation to learn better than before, and their capacity to determine what they need to learn (Mahartika et al., 2023). The proficiencies previously indicated exhibit a robust link with the extent of students' self-directed learning (SDL). Simultaneously, external environmental elements also significantly impact students' achievement in educational institutions. This indicates that the students' success in their academic pursuits is closely linked to their active participation in the educational setting and their capacity to independently pursue learning.

II. METHOD

The present research employed ex post facto research design with the type of quantitative research. Ex post facto is research on variables whose events have occurred prior to the research (Kerlinger & Lee, 2000). This research sought to examine the impact of students' learning environment and self-directed learning on their academic accomplishment. The focus was on English Language Education Department students at Yogyakarta State University. The research was carried out in the English Language Education Department of Yogyakarta State University, located at Jl. Colombo No.1, Karang Malang, Caturtunggal, Depok District, Sleman Regency, Special Region of Yogyakarta. It was completed between November 2023 and June 2024, with data collection taking place during the even semester, specifically in April 2024.

The population for this research consisted of students enrolled in the English Language Education Department at Yogyakarta State University, including both undergraduate and master's degree students. There were a total of 1874 students in the population which consisted of 1289 undergraduate degree students and 585 master's degree students. This research employed convenience sampling to determine the sample of this research. Convenience sampling, also known as haphazard sampling, is a method of non-probability or non-random sampling. It involves selecting individuals from the target population based on practical criteria such as easy accessibility, geographical proximity, availability, or willingness to participate. This method is used for research purposes (Dörnyei, 2007). In the present research, the willingness to participate in terms of filling out the questionnaires is important since the researcher used the Google Form in gathering the data.

Composite questionnaires were used in this study. The first section was to collect participants' demographic information including their educational level and GPA scores. The next section consists of 28 items of the EFL Learning Environment Questionnaire (QEFL-LE) to measure the students' learning environment. The last section consists of 10 items from the Self-directed Learning Scale (SDLS) questionnaire to examine their self-directed learning. Both instruments are arranged on 5 point-Likert scale.

The researcher employed the IBM Statistical Package for Social Sciences (SPSS) to examine the acquired data. Regarding the hypothesis testing, the researcher used several data analysis technique namely Simple Regression Analysis, Multiple Regression Analysis, and Multivariate Analysis of Variance (MANOVA).

III. FINDINGS AND DISCUSSION

1. Hypothesis One

Table 1. ANOVA Table of QEFL-LE

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.551	1	3.551	33.661	.000[b]
	Residual	10.970	104	.105		
	Total	14.521	105			

a. Dependent Variable: Academic Achievement
b. Predictors: (Constant), Learning Environment

According to the table 1 provided, the significance value is 0.000, which is less than 0.05. Therefore, the regression model can be employed to predict participation variables, namely the influence of variables from the learning environment (X1) on academic achievement (Y).

Table 2. Coefficients of QEFL-LE

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.873	.268		6.983	.000

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	Learning Environment	.013	.002	.494	5.802	.000

Based on Table 2, the sig value is 0.000 which suggests that the students' academic achievement was significantly predicted by their learning environment. Therefore, it confirms the first null hypothesis, which suggests that students' learning environment, does not give a positive influence towards their academic achievement, is rejected. On the other hand, the first alternative hypothesis, which suggests that the students' learning environment predicts their academic achievement, is accepted.

Table 3. Model Summary of QEFL-LE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.494[a]	.245	.237	.32479

a. Predictors: (Constant), Learning Environment

The results indicated that the coefficient of determination (R square) is 0.245, indicating that the learning environment variable (X1) has a 24.5% influence on academic achievement (Y).

2. Hypothesis Two

Table 4. ANOVA Table of SDLS

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.892	1	3.892	38.081	.000[b]
	Residual	10.629	104	.102		
	Total	14.521	105			

a. Dependent Variable: Academic Achievement
b. Predictors: (Constant), Self-directed Learning

The significance value is 0.000, which is less than 0.05. Therefore, the regression model can be employed to predict the influence of variables from the self-directed learning (X2) on academic achievement (Y).

Table 5. Coefficients of SDLS

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.977	.236		8.395	.000
	Self-directed Learning	.035	.006	.518	6.171	.000

a. Dependent Variable: Academic Achievement

Based on Table 5, the sig value is 0.000 which suggests that the students' academic achievement was significantly predicted by their self-directed learning. Therefore, it confirms the first null hypothesis, which suggests that students' self-directed learning, does not give a positive influence towards their academic achievement, is rejected. On the other hand, the first alternative hypothesis, which suggests that the students' self-directed learning gives a positive influence toward their academic achievement, is accepted.

Table 6. Model Summary of SDLS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.518[a]	.268	.261	.31969

a. Predictors: (Constant), Self-directed Learning

The results indicated that the coefficient of determination (R square) is 0.268, indicating that the self-directed learning variable (X2) has a 26.8% influence on academic achievement (Y).

3. Hypothesis Three

Table 7. ANOVA Table of QEFL-LE and SDLS

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.368	2	2.184	22.156	.000[b]
	Residual	10.153	103	.099		
	Total	14.521	105			

a. Dependent Variable: Academic Achievement
b. Predictors: (Constant), Learning Environment, Self-directed Learning

According to the table 7 provided, the significance value is 0.000, which is less than 0.05. Therefore, the regression model can be employed to predict participation variables, namely the influence of variables from learning environment (X1) and self-directed learning (X2) on academic achievement (Y).

Table 8. Coefficients of QEFL-LE and SDLS

Coefficients[a]

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

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		B	Std. Error	Beta		
1	(Constant)	1.681	.268		6.282	.000
	Self-directed Learning	.023	.008	.336	2.879	.005
	Learning Environment	.007	.003	.256	2.197	.030

a. Dependent Variable: Academic Achievement

Taking a closer look at the influence of the independent variables toward the dependent variable, table 4.25 revealed that self-directed learning (β = 0.023, p = 0.005) and learning environment (β = 0.007, p = 0.030) were very significantly predict the students' academic achievement because their sig. values were lower than 0.05. Therefore, the third alternative hypothesis was accepted.

Table 9. Model Summary of QEFL-LE and SDLS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.548[a]	.301	.287	.31397

a. Predictors: (Constant), Learning Environment, Self-directed Learning

The results revealed that the coefficient of determination (R square) is 0.301, suggesting that the learning environment and self-directed learning variables (X1 & X2) simultaneously has a 30.1% impact on academic achievement (Y).

4. Hypothesis Four

In this section of the findings, the researcher used One-way multivariate analysis of variance (MANOVA) analysis to investigate how the students' learning environment, self-directed learning, and academic achievement scores differ by their educational level. The homogeneity test was also involved in the analysis. The present research was followed up with independent sample t-test to determine how the variables are differ by their groups.

Table 10. Result of the Homogeneity Test

Box's Test of Equality of Covariance Matrices[a]

Box's M	19.714
F	3.159
df1	6
df2	25476.819
Sig.	.004

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.
a. Design: Intercept + Groups

According to Hahs-Vaughn (2016), all the data were indicated homogenous when the sig value was greater than 0.001. Therefore, the homogeneity test result in the table 4.27 above showed that all the data were homogenous because the sig value was 0.004.

Table 11. Result of the Multivariate Test

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.993	5052.529[b]	3.000	102.000	.000
	Wilks' Lambda	.007	5052.529[b]	3.000	102.000	.000
	Hotelling's Trace	148.604	5052.529[b]	3.000	102.000	.000
	Roy's Largest Root	148.604	5052.529[b]	3.000	102.000	.000
Groups	Pillai's Trace	.485	32.067[b]	3.000	102.000	.000
	Wilks' Lambda	.515	32.067[b]	3.000	102.000	.000
	Hotelling's Trace	.943	32.067[b]	3.000	102.000	.000
	Roy's Largest Root	.943	32.067[b]	3.000	102.000	.000

a. Design: Intercept + Groups
b. Exact statistic

A statistically significant MANOVA effect was obtained, Wilks' Lambda = 0.000, F = 32.067, p < 0.05. The MANOVA results showed that there was a statistically difference between two different groups and students' scores of three variables (p < 0.05).

Table 12. Result of the Test of Between-Subjects Effects

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	LE	706.122[a]	1	706.122	3.775	.055
	SDL	263.835[b]	1	263.835	9.268	.003
	AA	6.616[c]	1	6.616	87.045	.000
Intercept	LE	1254760.349	1	1254760.349	6708.598	.000
	SDL	161233.646	1	161233.646	5663.856	.000
	AA	1126.304	1	1126.304	14817.928	.000
Groups	LE	706.122	1	706.122	3.775	.055

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	SDL	263.835	1	263.835	9.268	.003
	AA	6.616	1	6.616	87.045	.000
Error	LE	19451.915	104	187.038		
	SDL	2960.580	104	28.467		
	AA	7.905	104	.076		
Total	LE	1457186.000	106			
	SDL	185534.000	106			
	AA	1252.972	106			
Corrected Total	LE	20158.038	105			
	SDL	3224.415	105			
	AA	14.521	105			

a. R Squared = .035 (Adjusted R Squared = .026)
b. R Squared = .082 (Adjusted R Squared = .073)
c. R Squared = .456 (Adjusted R Squared = .450)

From the table above, it can be concluded that there was a statistically different effect between bachelor students, master students, and students' self-directed learning scores ($F(1.104) = 9.268$, $p < 0.05$). There was also a statistically different effect between bachelor students, master students, and students' academic achievement scores ($F(1.104) = 87.045$, $p < 0.05$). However, there was no significantly different effect between two groups of students and the students' scores of learning environment ($F(1.104) = 3.775$, $p > 0.05$). In conclusion, there were a statistically significant difference between bachelor students, master students, and the students' self-directed learning and academic achievement scores. However, no significant differences were found between bachelor students, master students, and the students' scores in learning environment because the sig. value was more than 0.05.

Table 13. Result of the Independent T-test

Independent Samples Test							
		Levene's Test		t-test for Equality of Means			
						Significance	
		F	Sig.	t	df	One-Sided p	Two-Sided p
LE	Equal var. assumed	.161	.689	-1.943	104	.027	.055
	Equal var. not assumed			-1.938	61.452	.029	.057
SDL	Equal var. assumed	1.860	.176	-3.044	104	.001	.003
	Equal var. not assumed			-3.139	66.642	.001	.003
AA	Equal var. assumed	7.954	.006	-9.330	104	.000	.000
	Equal var. not assumed			-11.476	100.001	.000	.000

It can be seen from the table above that there was a significant difference between the bachelor and master students' scores in self-directed learning and academic achievement (sig. (2-tailed) < 0.05). However, there was no significantly different effect between two groups of students and the students' scores in learning environment (sig. (2-tailed) > 0.05).

Table 14. Result of the Descriptive Statistics

Descriptive Statistics				
	Educational Level	Mean	Std. Deviation	N
LE	Bachelor's degree	114.70	13.646	73
	Master's degree	120.27	13.744	33
	Total	116.43	13.856	106
SDL	Bachelor's degree	40.41	5.462	73
	Master's degree	43.82	5.040	33
	Total	41.47	5.542	106
AA	Bachelor's degree	3.2501	.31116	73
	Master's degree	3.7897	.17082	33
	Total	3.4181	.37188	106

According to the table above, students' scores in learning environment do not differ significantly by their educational level. Students from bachelor's degree ($M = 114.70$) have lower scores compared to students from master's degree ($M = 120.27$). In addition, students' scores in the self-directed learning do not differ significantly by their groups. Students from master's degree ($M = 43.82$) have higher scores compared to students from bachelor's degree ($M = 40.41$). Finally, students' academic achievement does slightly differ by their groups. Master's degree students ($M = 3.7897$) have a relatively higher scores compared to the bachelor's degree students ($M = 3.2501$). In conclusion, all scores from the master's degree students were always higher than the scores from the bachelor's degree students.

IV. Discussion

The results indicate a notable disparity in the learning environment, self-directed learning, and academic performance of students based on their educational level (bachelor's and master's degree). Furthermore, the current research consistently demonstrated that master's degree students outperformed bachelor's degree students in every aspect. The present study's findings validated the research conducted by Chatterjee & Correia (2020), which revealed

that graduate students exhibit a stronger correlation compared to undergraduates. This correlation exists between their attitude towards a supportive learning environment and their perception of community.

Dodd et al. (2021) found that undergraduate students and those pursuing a graduate certificate or diploma had higher levels of future anxiety, as well as lower levels of mental wellness and overall life orientation (feeling of coherence) compared to postgraduate students. weaker subjective social status, weaker sense of coherence, increased anxiety, bad overall learning experience, and significant impact on study are all strong predictors of lower wellbeing.

Conversely, Dörnyei & Ushioda (2021) stated that the students' lecturers and peers help them improve their academic achievement which increases their motivation to learn, the motivation for academic acquisition is primarily influenced by external factors no matter what their educational level is. However, the present research findings showed that the undergraduate students consistently achieve lower scores in all variables. Aina et al. (2022) argued that the motivation levels of the majority of undergraduate students are lower when compared to those of graduate students. Although undergraduate students consistently achieve lower scores, the analysis of both undergraduate and graduate students has revealed positive outcomes. This illustrates that to improve students' academic performance, they need to improve their ability to learn on their own initiative and improve their learning environment in order to provide more support for their learning process. Consistent with other research conducted by Kate (2023), the findings suggest that students with a greater degree of academic achievement exhibit a common characteristic of experiencing a higher level of perception to have good learning environment.

As reported in the findings, students' academic achievement is significantly affected by learning environment. It indicates that positive or good atmosphere and environment in the students' surrounding has a strong influence in improving their academic performance. This is in line with Baafi (2021) who stated that the good learning environment is characterized by an educational setting where academic activities take place that effectively engage and stimulate students, leading to productive learning.

The research findings showed that the students' learning environment both from undergraduate and graduate students were relatively high. The result of the QEFL-LE tendency categories showed that 79.2% of the respondents were included to a very high category. On the other hand, there was no respondents that were categorized as very low. The college's environment is very important to concern because university students are expected to have a capacity to be a leader in the future. The learning environment significantly influences the development of high-achieving students who have the potential to become exceptional leaders and managers on a global scale (Folami et al., 2021). This is also connected to the purpose of education in Indonesia, as stated in the Regulation of the Government of Indonesia, No. 14, 2005, is to develop the ability to shape character and enhance the civilization and dignity of the people. This is done within the intellectual life of the nation, with the aim of developing students' potential to be faithful to God, honorable, healthy, knowledgeable, competent, creative, independent, democratic, and responsible.

To develop students that represent the qualities mentioned earlier, it is important to provide tangible examples from lecturers and implement effective efforts within educational institutions to foster a conducive learning atmosphere. The research findings indicate that the efforts of Yogyakarta State University have been successfully implemented. According to Aneke (2022), educational institutions that do not offer adequate learning facilities and fail to create a favorable environment for teaching and learning are unlikely to provide the best education to their pupils, particularly in terms of academic performance.

As reported in the findings, it was found that students' academic achievement is significantly predicted by their self-directed learning. The results indicated that the coefficient of determination (R square) is 0.268, indicating that the self-directed learning variable has a 26.8% influence on academic achievement which was the second best out of three different regression model in this research. Furthermore, the present research's findings were parallel the findings of Grengia et al. (2022) stated that that self-directed learning can predict the students' academic achievement. This means that the self-directed learning is manifested most of the time among English department students in Yogyakarta State University. This research adopted Self-directed Learning Scale (SDLS) instrument by Zhang & Yang (2023) which consists of two constructs namely students' initiative and ability of SDL and students' self-concept of SDL.

An analysis using multiple regression was undertaken to ascertain the effect of independent variables (learning environment and self-directed learning) toward the dependent variable (academic achievement), which was found to have highly significant effect. Based on the research findings, the coefficient of determination was 0.301 (30.1% influence) which was the best model to predict the students' academic achievement. The findings of the present research are in line with previous research by Ramos (2023) and Pishghadam et al. (2022) which stated that both intellectual and non-intellectual can be the predictor of the students' academic achievement.

Previous studies have highlighted the importance of students enhancing their self-directed learning skills when they face challenges in carrying out learning tasks or locating appropriate resources (Dakhi et al., 2020; Sitthiworachart et al., 2021; Syahrawati et al., 2022). According to Hua et al. (2024), here is a strong connection between the educational setting and the scholastic accomplishments of university students. They assert that self-directed learning (SDL) plays a vital role in managing the external learning environment. University-level students are required to manage a wide variety of instructional resources and regularly participate in conversations with

their fellow students. In order to attain greater academic success, students must create a conducive learning environment and improve their capacity for self-directed learning.

V. CONCLUSION

The primary objective of the present research was to analyze the influence of students' learning environment and self-directed learning toward their academic achievement. This research revealed that English Language Education Department students at Yogyakarta State University (UNY) have a high level of learning environment and self-directed learning as EFL learners.

The research's major finding confirmed most of several previous research that master's degree students' learning environment and self-directed learning level were higher than the bachelor's degree students. It means that graduate students in English Language Education Department of UNY have better learning environment and more ready to become autonomous learners.

The second major findings were that students' academic achievement is significantly influenced or predicted by their learning environment according to the results of the statistical test. The academic achievement of both undergraduate and graduate students is also significantly predicted or influenced by their self-directed learning level.

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