Explorations in English Learning

The Correlation between SDL (Self-Directed Learning) Level and the Argumentative Writing Performance in EFL Classes

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Abstract In EFL contexts, self-directed learning (SDL) is important for supporting writing development, particularly argumentative writing, which requires learners to generate ideas, organize arguments, and use evidence effectively. However, EFL learners often face difficulties in argumentative writing, especially in organization, coherence, and language use. Although previous studies have shown a positive relationship between SDL and general writing performance, limited research has focused specifically on the relationship between SDL and argumentative writing performance in higher education contexts. This study aimed to examine the correlation between SDL levels and students' argumentative writing performance and to identify the distribution of SDL levels among EFL learners. The study employed an ex-post facto quantitative correlational design. The participants were 26 students from the English Education Program at the University of Mataram. Data were collected using an adapted 40-item Self-Rating Scale of Self-Directed Learning (SRSSDL) questionnaire and an argumentative writing test. Data were analyzed using SPSS version 25.0. The results showed that 61.5% of students had a moderate level of SDL, while 38.5% had a high level. The Pearson correlation analysis revealed a very strong and significant positive relationship between SDL and argumentative writing performance ($r = .885$, $p < .01$). This indicates that students with higher SDL levels tend to achieve better writing performance. It is suggested that future researchers investigate other factors influencing argumentative writing performance, such as critical thinking skills, writing motivation, and language proficiency, and explore SDL in different EFL contexts with larger samples.

Keywords: writing skill; argumentative writing; self-directed learning; correlation study

INTRODUCTION

In the twenty-first century, rapid technological advancement and the emergence of the Fourth Industrial Revolution have transformed educational practices worldwide. As information becomes increasingly accessible, learners are expected to develop the ability to acquire knowledge independently and continuously throughout their lives. Consequently, educational institutions are placing greater emphasis on fostering learner autonomy and lifelong learning skills. One approach that supports these goals is self-directed learning (SDL), which encourages students to take responsibility for their own learning processes.

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Self-directed learning refers to a process in which learners take the initiative to identify their learning needs, formulate learning goals, locate appropriate resources, select and implement learning strategies, and evaluate learning outcomes (Knowles, 1975). SDL has gained considerable attention in higher education because it enables learners to become more independent, responsible, and actively engaged in their learning. According to Gibbons (2002), SDL encourages students to move beyond familiar learning situations and apply their knowledge in authentic contexts outside the classroom. Similarly, Morrow (1993) argued that SDL supports learners in developing responsibility, decision-making skills, and self-management throughout the learning process. Furthermore, SDL allows learners to customize their learning approaches, develop personal competencies, and prepare themselves for continuous learning beyond formal education (Ariani, 2018).

Although SDL is considered an important component of successful learning, learners may demonstrate different levels of self-directedness. Willey (1983) suggested that individuals possess varying levels of SDL due to differences in personality and personal characteristics. In addition, environmental factors and learning motivation have been identified as significant contributors to the development of SDL (Huang, 2008). Understanding students' SDL levels is therefore important because learners with higher levels of self-directedness are more likely to take responsibility for achieving their academic goals and meeting their learning needs.

In English as a Foreign Language (EFL) context, SDL may play a particularly important role in the development of writing skills. Writing is widely recognized as one of the most challenging language skills because it requires learners to generate ideas, organize information, apply grammatical knowledge, and communicate effectively in written form. For EFL learners, these challenges become even more complex due to limitations in linguistic knowledge and language proficiency (Oshima & Hogue, 2006). Consequently, successful writing often requires substantial independent practice, self-monitoring, and continuous improvement beyond classroom instruction.

Among various forms of academic writing, argumentative writing is considered one of the most demanding. Argumentative writing requires students not only to express opinions but also to support claims with logical reasoning and credible evidence while addressing opposing viewpoints. According to Oshima and Hogue (2006), the primary objective of argumentative writing is to persuade readers by presenting a well-supported position on a particular issue. To achieve this objective, writers must demonstrate critical thinking, effective organization, and the ability to evaluate and synthesize information. These requirements make argumentative writing a complex task for many EFL learners.

Previous studies have documented various difficulties experienced by EFL learners in argumentative writing. For example, Alfiah (2019) found that Indonesian students encounter both cognitive and linguistic challenges. Cognitive difficulties include problems related to text organization, coherence, punctuation, spelling, and the development of arguments, whereas linguistic difficulties involve grammar, word choice, and the use of appropriate language structures. Among these challenges, cognitive problems were reported as the most dominant. Such findings suggest that students need not only linguistic competence but also the ability to independently regulate and improve their learning in order to produce effective argumentative texts.

The importance of SDL in writing development has been highlighted in previous studies. Learners with higher levels of SDL are generally more capable of identifying their learning needs, seeking appropriate resources, practicing independently, and monitoring their own progress. In addition, SDL encourages students to become more active, responsible, and autonomous in overcoming learning difficulties both inside and outside the classroom (Savitri, 2021). These characteristics may be particularly beneficial for argumentative writing, which requires extensive preparation, critical analysis, and continuous revision. As Fitriani (2019) noted, students are often expected to generate their own ideas, formulate thesis statements, and support arguments with valid evidence. Accomplishing these tasks successfully requires substantial independent learning and self-regulation.

Several studies have investigated the relationship between SDL and writing performance among EFL learners. For instance, Aghayani and Janfeshan (2020) examined the effect of SDL on EFL learners' writing performance and reported positive outcomes. However, existing research has primarily focused on general writing ability, factors influencing SDL, or instructional approaches that promote writing development through SDL. Limited attention has been given to the relationship between SDL and argumentative writing performance, particularly in higher education EFL contexts. Given the cognitive and linguistic demands of argumentative writing, investigating this relationship may provide valuable insights into the role of learner autonomy in writing achievement.

Therefore, this study aims to examine the correlation between self-directed learning and argumentative writing performance among EFL learners in higher education. Specifically, the study seeks to determine the strength and direction of the relationship between students' SDL levels and their performance in argumentative writing tasks. Understanding this relationship may contribute to the development of instructional practices that foster both learner autonomy and writing proficiency, thereby supporting students' success in academic writing and lifelong learning.

METHOD

Research Design

This study employed a quantitative correlational design using an ex post facto approach to investigate the relationship between students' self-directed learning (SDL) levels and their argumentative writing performance in EFL classes. A correlational design was considered appropriate because the study aimed to examine the strength and direction of the relationship between two variables without manipulating them.

An ex post facto design was adopted because both variables had already occurred and could not be controlled or manipulated by the researcher. According to Cohen, et al. (2007), ex post facto research examines possible relationships among variables by investigating existing conditions and events retrospectively. In this study, the level of self-directed learning served as the independent variable, while argumentative writing performance served as the dependent variable. Therefore, the study sought to determine whether a significant relationship existed between students' SDL levels and their argumentative writing performance.

Population and Sample

The population of this study consisted of third-semester students of the English Language Education Department who were enrolled in the Argumentative Writing course. The sample was selected using criterion sampling. According to Cohen and Crabtree (2006), criterion sampling involves selecting participants who meet predetermined criteria relevant to the research objectives. The criteria for participation in this study were enrolled in the third semester of the English Language Education Department and took the Argumentative Writing course during the period of data collection. A total of 26 students who met these criteria participated in the study.

Data Collection

Prior to data collection, participants were informed about the purpose of the study and their participation was voluntary. Their responses were kept confidential and used solely for research purposes. Data were collected using two instruments: (1) the Self-Rating Scale of Self-Directed Learning (SRSSDL) questionnaire and (2) an argumentative writing test. The SRSSDL questionnaire was administered to measure students' levels of self-directed learning. Meanwhile, the argumentative writing test was used to assess students' argumentative writing performance. Both instruments were distributed online through Google Forms. The SRSSDL questionnaire employed a five-point Likert scale consisting of: 5 (Always) to 1 (Never). Higher scores indicated higher levels of self-directed learning. To assess argumentative writing performance, students completed an argumentative essay task. The essays were evaluated using an argumentative writing rubric, and the resulting scores were used as indicators of students' writing performance.

Research Instruments

Two instruments were used in this study. For students' self-directed learning levels questionnaire were measured using the Self-Rating Scale of Self-Directed Learning (SRSSDL) developed by Williamson (2007). The SRSSDL consists of 40 items designed to assess learners' self-directedness in the learning process includes five dimensions: awareness, learning strategies, learning activities, evaluation, interpersonal skills. Each item was rated on a five-point Likert scale ranging from 1 (Never) to 5 (Always). The total score ranged from 40 to 200.

Meanwhile, students' argumentative writing performance was measured using an argumentative essay writing test. Participants were required to write an argumentative essay based on a given topic. The essays were assessed using an argumentative writing rubric adapted from the Yale writing rubric. The rubric evaluated five components, there are introduction, body paragraphs and argument development, conclusion, organization and coherence, mechanics and language use. Each component was scored according to the criteria specified in the rubric, and the total score represented the student's argumentative writing performance.

Instrument Validity and Reliability

Validity refers to the extent to which an instrument measures what it is intended to measure (Brown, 2004). The SRSSDL questionnaire has been previously developed and validated by Williamson (2007) to measure self-directed learning among students. For the argumentative writing test, content validity was established through expert judgment. The writing rubric was reviewed by EFL writing lecturers to ensure that it adequately measured the essential components

of argumentative writing, including argument development, organization, and language use. Meanwhile reliability refers to the consistency and dependability of a research instrument (Brown, 2004). The reliability of the argumentative writing test was examined through inter-rater reliability. Two raters independently assessed the students' essays using the same scoring rubric. The scores from both raters were then compared to determine the consistency of the ratings.

Normality Test

Before conducting the correlation analysis, a normality test was performed to determine whether the data were normally distributed. The Kolmogorov-Smirnov test was used to assess normality. The data were considered normally distributed when the significance value (p) was greater than .05. If the assumption of normality was met, Pearson's Product Moment Correlation could be applied.

Data Analysis

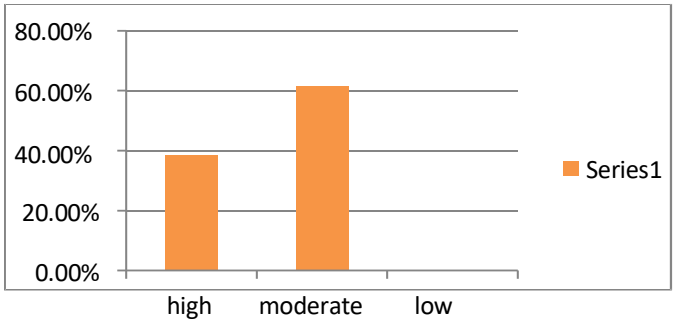
The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS). The study employed Pearson's Product Moment Correlation to determine whether a significant relationship existed between students' self-directed learning levels and their argumentative writing performance. The null hypotheses (H_0) stated that there is no significant correlation between self-directed learning level and argumentative writing performance among EFL students, meanwhile alternative hypothesis (H_1) is there is a significant correlation between self-directed learning level and argumentative writing performance among EFL students. The level of significance was set at $\alpha = .05$. The null hypothesis was rejected if the significance value (p) was less than .05.

FINDINGS

The instrument, which was given to 26 Argumentative writing students in the academic year 2020, was designed to assess the correlation between self- directed learning and students' argumentative writing performance in EFL classes. The following explanation shows data on students' self-directed learning levels and their argumentative writing performances.

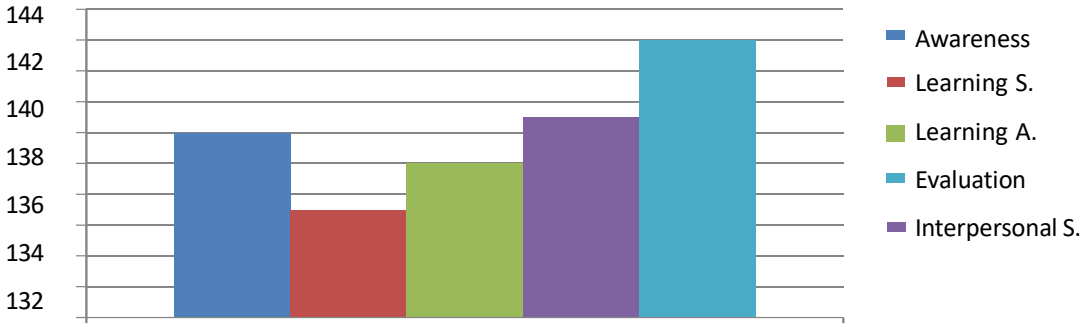
Students' Self-directed Learning Level

Data were collected from 26 third-semester students enrolled in the Argumentative Writing course. The instruments used in this study consisted of an adapted 40-item Self-Rating Scale of Self-Directed Learning (SRSSDL) questionnaire and an argumentative writing assessment. Based on the scoring criteria, students who obtained scores between 40 and 90 were classified as having low SDL, those who obtained scores between 91 and 140 were classified as having moderate SDL, and those who obtained scores between 141 and 200 were classified as having high SDL. The results showed that 10 students (38.5%) were classified as having high levels of self-directed learning, while 16 students (61.5%) were classified as having moderate levels of self-directed learning. No students were classified as having low levels of self-directed learning. These findings indicate that most students demonstrated a moderate level of self-directed learning. This suggests that although students exhibited several characteristics of self-directed learners, they still required guidance and support from lecturers during the learning process.



Picture 1 Students' Self-Directed Learning Percentages

To obtain a more detailed understanding of students' self-directed learning, the scores for each SDL dimension were analyzed.



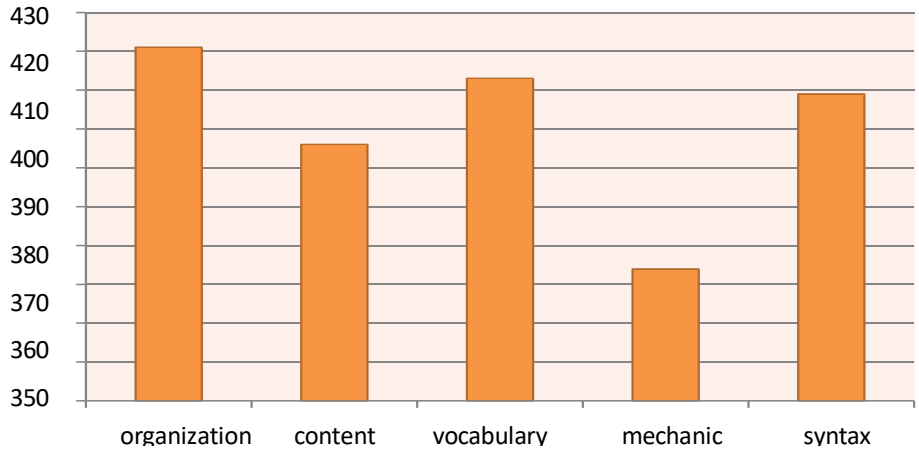
Picture 2 The Level in Each Component of SDL

The results showed that interpersonal skills obtained the highest average score (142), indicating a high level of self-directed learning in this dimension. This finding suggests that students generally demonstrated positive interactions with others during the learning process and were able to collaborate effectively with peers and lecturers. The evaluation dimension obtained an average score of 137, indicating a moderate level of SDL. Students generally showed an ability to reflect on their learning experiences and evaluate their progress. However, some students still experienced difficulties in monitoring learning goals and assessing their own learning development. The awareness dimension obtained an average score of 136. This result suggests that students were generally aware of their learning needs and learning objectives. They demonstrated an understanding of the importance of utilizing various learning resources and recognized the role of lecturers as facilitators of learning.

The learning activities dimension obtained an average score of 134, which also falls within the moderate category. This indicates that students actively participated in learning activities and attempted to connect their learning experiences with practical applications. Nevertheless, some students still faced challenges in maintaining concentration and organizing information effectively during the writing process. Among the five dimensions, learning strategies obtained the lowest average score (131). Although this score still falls within the moderate category, it suggests that students needed further support in developing effective learning strategies to enhance their independent learning skills. Overall, the findings indicate that students demonstrated moderate to high levels of self-directed learning across all dimensions, with interpersonal skills emerging as the strongest aspect of their self-directed learning profile.

Students' Argumentative Writing Performance

Students' argumentative writing performance was assessed through an argumentative essay writing task. The essays were evaluated using an argumentative writing rubric that assessed several aspects of writing quality.



Picture 3 Distribution of writing components

The analysis revealed that organization obtained the highest total score (421), indicating that most students were able to organize their essays effectively. Students generally demonstrated the ability to provide clear introductions, develop body paragraphs logically, and conclude their essays appropriately. Vocabulary obtained the second-highest total score (412), followed by syntax (409), content (397), and mechanics (365). These findings suggest that students generally possessed adequate vocabulary knowledge and grammatical competence to communicate their ideas effectively in argumentative writing.

Although students performed relatively well in most writing components, mechanics received the lowest total score. Common problems were found in punctuation, formatting, and other technical aspects of writing. These issues suggest that students need additional practice and guidance in applying writing conventions accurately. Overall, the findings indicate that students demonstrated relatively good argumentative writing performance, particularly in terms of organization and vocabulary use. However, mechanical aspects of writing remain an area requiring improvement.

Correlation Between Self-Directed Learning and Argumentative Writing Performance

Before conducting the correlation analysis, a normality test was performed to determine whether the data were normally distributed. Since the sample consisted of 26 participants, the Shapiro–Wilk test was used to assess normality.

Table 4 presents the results of the Shapiro–Wilk test for both variables.

Variable	Statistics	df	Sig.
Self-Directed Learning	.950	26	.178
Argumentative Writing Performance	.943	26	.092

The results showed that the significance value for self-directed learning was .178 and the significance value for argumentative writing performance was .092. Since both significance values were greater than .05, the data were normally distributed. Furthermore, the results of the Pearson Product-Moment Correlation analysis are presented in Table 4.4.

Table 4.4 Correlation Between Self-Directed Learning and Argumentative Writing Performance

Calculation	Writting	SRSSDL
Pearson Correlation	1	.885**
Sig. (2-tailed)		.000
Sum of Squares and Cross- products	3238.000	4675.000
Covariance	129.520	187.000
Pearson Correlation	.885**	1
Sig. (2-tailed)	.000	
Sum of Squares and Cross- products	4675.000	8622.654
Covariance	187.000	344.906

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

The analysis revealed a Pearson correlation coefficient of r = .885 between students' self-directed learning levels and argumentative writing performance. The significance value obtained was p = .000, which was lower than the predetermined significance level of .05. These findings indicate that there is a statistically significant positive correlation between self-directed learning and argumentative writing performance. Based on the interpretation criteria presented in the method, the correlation coefficient of .885 falls within the range of 0.80–1.00, indicating a very strong positive correlation. Therefore, the null hypothesis (H_0), which states that there is no significant correlation between self-directed learning levels and argumentative writing performance among EFL students, was rejected. Conversely, the alternative hypothesis (H_1) was accepted. This finding suggests that students who demonstrate higher levels of self-directed learning tend to achieve better performance in argumentative writing. In other words, self-directed learning appears to play an important role in supporting students' ability to produce effective argumentative essays.

DISCUSSION

Students' Self-Directed Learning Levels

The findings revealed that the majority of students demonstrated a moderate level of self-directed learning (SDL), while a smaller proportion achieved a high level of SDL. No students were classified as having a low level of self-directed learning. Among the five dimensions of SDL, interpersonal skills obtained the highest average score. This finding suggests that students tended to value interaction and collaboration as part of their learning process. According to Knowles (1975), self-directed learners are proactive individuals who take responsibility for identifying their learning needs, selecting learning strategies, utilizing available resources, and evaluating their own learning outcomes. The high score in the interpersonal skills dimension indicates that students recognized the importance of interacting with others to support their learning. Through communication with peers, lecturers, and various learning resources, students may gain new perspectives and information that contribute to their academic development.

The findings are consistent with previous research suggesting that self-directed learning plays an important role in language learning. Aghayani and Janfeshan (2020) reported that self-directed learners tend to demonstrate greater engagement in language learning activities and achieve better learning outcomes. In the context of EFL learning, students who actively seek information and utilize various learning resources are more likely to develop the knowledge and skills necessary for successful language use.

The results also showed that learning strategies obtained the lowest average score among the five SDL dimensions. Although the score remained within the moderate category, this finding suggests that students may still require guidance in selecting and applying effective learning strategies. Therefore, lecturers may play an important role in facilitating students' development of independent learning strategies while gradually encouraging greater learner autonomy.

Students' Argumentative Writing Performance

The findings indicated that students generally demonstrated satisfactory performance in argumentative writing. Among the assessed writing components, organization obtained the highest score, while mechanics received the lowest score. The high score in organization suggests that students were generally able to structure their essays effectively by providing clear introductions, logically developed body paragraphs, and appropriate conclusions. This finding is important because organization is one of the essential characteristics of effective argumentative writing. According to Oshima and Hogue (2006), argumentative essays require writers to present claims and supporting reasons in a logical and coherent manner to persuade readers.

In contrast, mechanics received the lowest score among the writing components. This finding indicates that students continued to experience difficulties related to punctuation, capitalization, spelling, and formatting. Although these issues did not necessarily prevent students from communicating their ideas, they may have affected the overall quality and clarity of the essays. Therefore, additional attention to writing conventions may help students further improve their argumentative writing performance.

Argumentative writing requires students to gather information, evaluate evidence, and construct logical arguments. As noted by Setyowati et al. (2017), argumentative writing encourages students to conduct independent inquiry and develop positions based on relevant evidence. Consequently, students must engage in higher-order thinking processes to produce effective argumentative essays.

The Relationship Between Self-Directed Learning and Argumentative Writing Performance

The results of the Pearson Product-Moment Correlation analysis revealed a very strong positive correlation between self-directed learning and argumentative writing performance ($r = .885$, $p < .05$). This finding indicates that students with higher levels of self-directed learning tended to achieve higher scores in argumentative writing. The finding supports the theory proposed by Knowles (1975), who argued that self-directed learners actively take responsibility for their own learning by identifying learning needs, selecting appropriate learning strategies, utilizing learning resources, and evaluating learning outcomes. These characteristics may support the development of writing skills because students are more likely to seek information independently, revise their work, and monitor their learning progress.

The result is also consistent with the findings of Aghayani and Janfeshan (2020), who reported that self-directed learning is positively associated with language learning achievement. Students who demonstrate higher levels of self-directed learning are generally more capable of managing their learning activities and utilizing available resources effectively. Such learning behaviors may

contribute to the development of ideas, arguments, and supporting evidence in argumentative writing.

Furthermore, argumentative writing requires students to analyze information critically and construct logical arguments. According to Fisher (2013), critical thinking plays an important role in the production of effective argumentative essays. Similarly, Hedricson (2007) suggested that critical thinking is closely related to self-directed learning because learners are expected to evaluate information, reflect on their learning, and make informed decisions independently. These characteristics may explain why students with higher levels of self-directed learning tended to demonstrate better argumentative writing performance.

CONCLUSION

Based on the findings of this study, several conclusions can be drawn. First, the results revealed that the majority of students demonstrated a moderate level of self-directed learning, while the remaining students demonstrated a high level of self-directed learning. No students were categorized as having a low level of self-directed learning. These findings indicate that the students generally exhibited characteristics of self-directed learners, although some still required guidance in managing their learning process. Second, the results showed that students generally achieved satisfactory performance in argumentative writing. The findings suggest that students were able to organize and develop their argumentative essays effectively, although some difficulties remained in the mechanical aspects of writing. Third, the Pearson Product-Moment Correlation analysis revealed a statistically significant positive relationship between self-directed learning and argumentative writing performance ($r = .885$, $p < .05$). The correlation coefficient indicates a very strong positive correlation between the two variables. Therefore, the null hypothesis (H_0) was rejected and the alternative hypothesis (H_1) was accepted. Overall, the findings suggest that students with higher levels of self-directed learning tended to achieve higher argumentative writing scores. This indicates that self-directed learning is positively associated with argumentative writing performance among EFL students. Furthermore, future researchers are encouraged to investigate the relationship between specific dimensions of self-directed learning and writing performance using larger samples and more advanced statistical analyses. In addition, future studies may explore other factors that influence argumentative writing performance, such as critical thinking skills, writing motivation, self-efficacy, and language proficiency.

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