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The Relationship Between Assertive Behavior and Academic Achievement of Biology Education Students: The Contribution of Assertive Behavior in Improving Academic Outcomes

Sri Yulianti[1], Joan S Awingan[2]
[1] Biology Education Study Program, Alauddin Islamic State University of Makassar, Sulawesi Selatan, Indonesia
[2]Biology Department, Adamson University, Manila, Philippines

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ABSTRACT

Purpose of the study: The purpose of this study was to determine the level of assertive behavior of students in the Biology Education Department of UIN Alauddin Makassar, to describe students' learning achievements, and to analyze the relationship between assertive behavior and students' learning achievements in the department.

Methodology: This study uses a quantitative approach with a correlational design. The tool used is a questionnaire to measure assertive behavior, with 42 statements covering three aspects. The data were analyzed using SPSS software with descriptive and inferential analysis techniques. The survey was conducted at Campuses I and II UIN Alauddin Makassar, involving 82 students of the Biology Education Department, batch 2022 and 2023 as samples.

Main Findings: The average assertive behavior of Biology Education students is 115 with a standard deviation of 12.25, indicating heterogeneous data and a moderate tendency for assertive behavior. The average student learning achievement is 3.52 with a standard deviation of 0.16, indicating homogeneous data and very satisfactory learning achievement. There is a significant relationship between assertive behavior and learning achievement with a contribution of assertive behavior of 11%.

Novelty/Originality of this study: This study revealed a significant relationship between assertive behavior and academic achievement of Biology Education students, with assertive behavior contributing 11%. This finding provides new insights into the role of assertive behavior in influencing academic outcomes, as well as increasing understanding of factors that can improve student achievement in higher education settings.

Corresponding Author:
Sri Yulianti,
Biology Education Study Program, Alauddin Islamic State University of Makassar,
Jl. Sultan Alauddin No. 63, Makassar, Sulawesi Selatan, 90231, Indonesia.
Email: sriyuli@gmail.com

1. INTRODUCTION

Education is something that is needed by every individual. Education can be interpreted as a conscious effort to make oneself better. Education has the goal of humanizing humans, meaning that education can provide a positive influence to develop the potential of human resources (HR) within oneself so that they can become quality and reliable humans. In order to become a quality individual, sufficient and appropriate education is needed [1], [2]. The school education path is implemented in stages consisting of basic education, secondary education,

and higher education [3], [4]. Higher education is a bridge for students to become members of society who have academic abilities and are able to apply and develop their knowledge.

The knowledge gained is obtained by following the learning process. The learning process will not run optimally if students do not learn well. Assertive behavior is not just a communication skill; it reflects an individual's capacity to convey thoughts, feelings, and desires without fear, with honesty, responsibility, and a healthy level of self-confidence [5], [6]. When a person expresses his opinion, his creativity is reflected in politeness, respect for others, and sensitivity to the basic rights of others [7], [8]. Behind this behavior is a strong social awareness; individuals who are assertive consider the feelings and well-being of others. This social skill indicates extraordinary adaptability in social interactions, demonstrating the ability to adjust to various situations while still respecting human dignity. Assertive behavior will not be separated from student learning achievement.

Learning achievement is the result of measuring and assessing learning efforts. Evidence of a person's success after gaining learning experience or studying something is the Learning Achievement achieved by students within a certain time [9], [10]. Student learning achievement is the result of an assessment of learning activities that have been carried out and is a form of final formulation given by the lecturer to see how far the student's abilities are expressed in the form of symbols, numbers, letters or sentences that can reflect the results that have been achieved. Student learning achievement can be seen from the Cumulative Achievement Index obtained by students [11], [12]. Learning achievement is evidence of success that has been achieved by students where each learning activity can cause a distinctive change. Achievement of learning objectives in the form of learning achievement is the result of teaching and learning activities alone.

Biology learning opens a wide window for our understanding of life, from the molecular level to the larger ecosystem. This subject not only provides knowledge about the structure and function of living organisms, but also teaches the relationship between organisms and their environment [13], [14]. Through the exploration of concepts such as evolution, genetics, ecology, and biotechnology, students are introduced to the diversity of life and the processes that underlie it [15], [16]. Biology learning also teaches critical skills, such as observation, data analysis, and problem-solving abilities that are relevant not only in scientific contexts, but also in everyday life [17], [18]. In this way, this subject not only provides a deep understanding of the universe and life, but also develops critical thinking that prepares students to become skilled and open-minded individuals.

Assertive behavior has great relevance in the context of Biology learning because it influences interactions between students, allowing them to be more active in class discussions, exchange ideas, and collaborate in exploring complex Biology concepts. Students who demonstrate assertive behavior tend to be more confident in expressing opinions and asking questions, creating an inclusive and productive learning environment [19], [20]. Active involvement in the learning process, supported by assertive behavior, has a positive impact on their learning achievement in Biology [21], [22]. With the ability to express opinions and discuss openly, students can master difficult concepts better, deepen their understanding, and ultimately improve their academic achievement in Biology subjects.

Research conducted by Hidayatullah [23] which states that self-confidence which is part of personality is one of the factors that determines students' assertive behavior, where someone who believes in their abilities or has positive beliefs will be more confident, so they will have the courage to communicate and be more open (behave assertively). In this context, students who have strong self-confidence tend to show prominent assertive behavior, which in turn has a positive influence not only in social interactions, but also in their academic achievement. Previous studies have examined the relationship between assertiveness, self-esteem, academic achievement, and stress levels in high school students in conflict areas. The findings indicate that assertiveness has a very small contribution to academic achievement (1.4%) and other variables, such as self-esteem and stress [24]. In addition, the study emphasized more on demographic factors such as gender and place of residence in influencing the results. Meanwhile, the current study focuses specifically on the relationship between assertive behavior and academic achievement of students in a college environment, especially on Biology Education students at UIN Alauddin Makassar. The gap in this research lies in the educational context (high school vs college) and the different results regarding the contribution of assertiveness to academic achievement. Therefore, the current study is needed to provide new insights into the importance of assertive behavior in supporting the academic success of students at the higher education level..

The novelty of this study lies in the integration of assertive behavior with learning achievement in the context of Biology learning, which is rarely studied specifically. This study focuses on students of the Biology Education Department at UIN Alauddin Makassar, providing empirical data in the local context of Islamic higher education and highlighting the importance of soft skills such as assertive behavior as a supporting factor for academic success. With a multidisciplinary approach that combines education, communication psychology, and Biology, this study explores the extent to which assertive behavior affects students' active involvement in the learning process and their academic achievement [25]-[27]. Through a quantitative approach, this study provides a new contribution to the development of innovative learning methods that combine interpersonal skills to improve the quality of students' understanding and learning achievement in Biology courses.

This study is important to conduct because assertive behavior plays a significant role in increasing students' active involvement during the learning process, which has a direct impact on their understanding and academic achievement, especially in Biology courses. In addition, this study contributes to identifying non-cognitive factors, such as interpersonal skills, that can be optimized to support improving the quality of student education in higher education. Based on the description above, the purpose of this study is to determine the level of assertive behavior of students in the Biology Education Department of UIN Alauddin Makassar, to determine the description of the learning achievement of students in the Biology Education Department of UIN Alauddin Makassar, and to analyze how big the relationship is between assertive behavior and learning achievement of students in the Biology Education Department of UIN Alauddin Makassar.

2. RESEARCH METHOD

This research is a correlation research, namely a research conducted by collecting a number of data to find out or determine whether or not there is a relationship between two or more variables in order to measure the extent of the relationship between the two variables being measured. [28], [29]. This research was conducted at Campus I of Alauddin State Islamic University Makassar located at Jl. Sultan Alauddin No. 63 for the class of 2023, and Campus II of the Faculty of Tarbiyah and Teacher Training, Alauddin State Islamic University Makassar located at Jl. H.M. Yasin Limpo No. 36 Samata Sungguminasa for the class of 2022 with the research subjects being students of the Biology Education Department. The population of this study was the classes of 2022 and 2023 with a total of 327 students. While the sample to be used was 82 students. With the sampling technique using simple random sampling.

There are two variables in this study, namely, independent variables and dependent variables. Independent variables are variables that influence or cause changes or the emergence of dependent variables [30], [31]. The independent variable (X) is Assertive Behavior and the dependent variable (Y) is learning achievement. The instruments used are documentation and questionnaires to measure assertive behavior with a total of 42 statements. At the data analysis stage based on sample data, it was analyzed using descriptive statistical analysis techniques and inferential statistical analysis techniques. The following is a grid of the assertive behavior questionnaire instrument.

Table 1. Grid of Assertive Behavior Questionnaire Instrument

NO	Aspect	Indicator	Number of Questions
1.	Expressing Positive Feelings	Giving and receiving compliments Asking for help/favors Expressing feelings of liking and sympathy Initiating and engaging in conversations	18
2.	Self-affirmation	Maintaining absolute rights Refusing requests Expressing opinions	14
3.	Expressing negative feelings	Expressing displeasure Expressing anger	10
		Total	42

To score the Likert category scale, the answers are weighted or equated with quantitative values of 4, 3, 2, 1 for four positive statement choices and 1, 2, 3, 4 for negative statements. Researchers in creating Likert scales generally do not only limit the measurement scale to four levels, they often create it with 7, 8 or 9 choices. In addition, researchers can also use odd choices, for example 5, 4, 3, 2, 1. Or even choices such as 4, 3, 2, 1. The scores for positive statements (Favorable) and negative statements (Unfavorable) are as follows:

Table 2. Scoring Guidelines for the Assertive Behavior Scale

Answer	Favorable	Unfavorable
Strongly Agree (SA)	4	1
Agree (A)	3	2
Disagree (D)	2	3
Strongly Disagree (SD)	1	4

To categorize the level of assertive behavior and student learning achievement, research evaluation techniques are used. To see the category of the level of assertive behavior of students, five categories are used, namely: Very Low (VL), Low (L), Medium (M), High (H), and Very High (VH). To do the categorization, it can be seen in the table below.

Table 3. Categories of Assertive Behavior of Biology Education Students

Interval	Category
124,75 < x ≤ 139	Very high
115 < x ≤ 124,74	High
105,75 < x ≤ 115,24	Currently
96,25 < x ≤ 105,74	Low
82 < x ≤ 96,24	Very Low

Analysis of the learning achievement of students majoring in Biology Education, intake 2022 and 2023, Faculty of Tarbiyah and Teacher Training, UIN Alauddin Makassar, the author uses categories based on the Cumulative Achievement Index and passing grades referring to the UIN Alauddin Makassar education guidelines, namely:

Table 4. Categories of student learning achievement

NO	grade point	Predicate
1	3.76 – 4.00	Cumlaude
2	3.51 – 3.75	Very Satisfying
3	2.00 – 3.50	Satisfying

3. RESULTS AND DISCUSSION

To find out the mean (average) and standard deviation values of the data, a helper table is required as follows.:

Table 5. Helper Determining the Mean and Standard Deviation of Assertive Behavior of Biology Education Students, Department of Biology Education

Interval	f_i	x_i	$f_i x_i$	$x_i - \bar{x}$	$(x_i - \bar{x})^2$	$f_i(x_i - \bar{x})^2$
82 – 89	1	85.5	85.5	-30	930.25	930.25
90 – 97	5	93.5	467.5	-22.5	506.25	2531.25
98 – 105	9	101.5	913.5	-14.5	210.25	1892.25
106 – 113	22	109.5	2409	-6.5	42.25	929.5
114 – 121	19	117.5	2232.5	1.5	2.25	42.75
122 – 129	18	125.5	2259	9.5	90.25	1624.5
130 – 137	7	133.5	934.5	17.5	306.25	2143.75
138 – 145	1	141.5	141.5	-45.5	2070.25	2070.25
Total	82	854	9443	-91	4158	12164.5

$$\bar{X} = \frac{\sum f_i x_i}{\sum f_i} = 115, \qquad SD = \sqrt{\frac{\sum f_i (x_i - \bar{x})^2}{n-1}} = 12{,}25$$

Based on the results, it can be seen that the average obtained from assertive behavior data with a total of 82 respondents is 115. This means that the average of the total respondents or students majoring in biology education have assertive behavior that is in the moderate category. The standard deviation value obtained is 12.25, indicating that there is a data deviation of 12.25 from the average value obtained, which is 115. So it can be concluded that the data obtained is heterogeneous and has a tendency for each data to be different from one another.

Table 6. Percentage of Assertive Behavior of Biology Education Students

Interval	f_i	Percentage (%)
82 – 89	1	1.22
90 – 97	5	6.1
98 – 105	9	10.96
106 – 113	22	26.82
114 – 121	19	23.17
122 – 129	18	21.95
130 – 137	7	8.54
138 – 145	1	1.22
Total	82	100

Based on the table above, it is known that the interval 106-113 is the score obtained on the assertive behavior scale with the most respondents, namely 22 people with a percentage of 26.82%. Meanwhile, for the score obtained with the fewest respondents, namely in the interval 82-89 and 138-148, each only had 1 respondent

with a percentage of 1.22%. The total number of respondents used was 82, so the distribution for the other intervals was the interval 90-97 as many as 5 people, the interval 98-105 as many as 9 people, the interval 114-121 as many as 19 people, the interval 122-129 as many as 18 people, and the interval 130-137 as many as 7 people.

Table 5. Categories of Assertive Behavior of Biology Education Students

Interval	Kategori	f	%
124,75 < x ≤ 139	Very high	23	28.04
115 < x ≤ 124,74	High	16	19.51
105,75 < x ≤ 115,24	Currently	28	34.15
96,25 < x ≤ 105,74	Low	10	12.20
82 < x ≤ 96,24	Very Low	5	6.10

In the category in the interval 124.75 < × ≤ 139 the assertive behavior of biology education students is in the very high category. The number of students in this category is 23 people with a percentage of 28.04%. In the interval 115.25 < × ≤ 124.74 the assertive behavior of students is in the high category with the number of students as many as 16 people and a percentage of 19.51%. In the interval 105.75 < × ≤ 115.24 the assertive behavior of students is categorized as moderate with the number of students as many as 28 people and a percentage of 34.15%. In the interval 96.25 <×≤ 105.74, students' assertive behavior is categorized as low with the number of students as many as 10 people with a percentage of 12.20% and in the interval 82 <×≤ 96.24, students' assertive behavior is categorized as very low with the number of students as many as 5 people with a percentage of 6.10%. To find out the mean (average) and standard deviation values of the data, a helper table is required as follows:

Table 6. Helper to Determine the Mean and Standard Deviation of Learning Achievement of Biology Education Students

Interval	f_i	x_i	$f_i x_i$	$x_i - \bar{x}$	$(x_i - \bar{x})^2$	$f_i(x_i - \bar{x})^2$
3.20 – 3.29	10	3.25	32.5	-0.27	0.0729	0.729
3.30 – 3.39	6	3.35	20.1	-0.17	0.0289	0.1734
3.40 – 3.49	24	3.45	82.8	-0.07	0.0049	0.1176
3.50 – 3.59	16	3.55	56.8	0.03	0.0009	0.0144
3.60 – 3.69	15	3.65	54.75	0.13	0.0169	0.2535
3.70 – 3.79	7	3.75	26.25	0.23	0.0529	0.3703
3.80 – 3.89	3	3.85	11.55	0.33	0.1089	0.3267
3.90 – 3.99	1	3.95	3.95	0.43	0.1849	0.1849
Total	82	29.15	288.7	0.64	0.4712	2.1698

$$\bar{X} = \frac{\sum f_i x_i}{\sum f_i} = 3{,}52 \qquad SD = \sqrt{\frac{\sum f_i (x_i - \bar{x})^2}{n-1}} = 0{,}16$$

Based on the results, it can be seen that the average obtained from assertive behavior data with 82 respondents is 3.52. So it can be concluded that the learning achievement of biology education students in the 2022 and 2023 intakes is in the very satisfactory category. The standard deviation value obtained is 0.16, indicating that there is a data deviation of 0.16 from the average value obtained, which is 3.52. So it can be concluded that the standard deviation obtained is getting closer to zero, which means that the data obtained is homogeneous and has a tendency for the same data between one and another.

Table 7. Percentage of Learning Achievement of Biology Education Department Students

Interval	f_i	Percentage (%)
3.20 – 3.29	10	12.2
3.30 – 3.39	6	7.31
3.40 – 3.49	24	29.27
3.50 – 3.59	16	19.51
3.60 – 3.69	15	18.29
3.70 – 3.79	7	8.54
3.80 – 3.89	3	3.66
3.90 – 3.99	1	1.22
Total	82	100

Based on the results, the interval 3.40-3.49 is the interval of the number of biology education students' scores with the most, namely 24 people with a percentage of 29.27%. While the interval of scores with the least achievement is 3.90-3.99, which is only 1 person with a percentage of 1.22%. The total number of students used

as samples is 82, so the distribution for other intervals is the value interval of 3.20-3.29 as many as 10 people with a percentage of 12.2%, the value interval of 3.30-3.39 as many as 6 people with a percentage of 7.31%, the value interval of 3.50-3.59 as many as 16 people with a percentage of 19.51%, the value interval of 3.60-3.69 as many as 15 people with a percentage of 18.29%, the value interval of 3.70-3.79 as many as 7 people with a percentage of 8.54%, and the value interval of 3.80-3.89 as many as 3 people with a percentage of 3.66%.

Table 8. Categorization of Learning Achievements of Biology Education Department

NO	Performance Index	Predicate	Frequency	Percentage (%)
1	3.76 – 4.00	Cumlaude	11	13.41
2	3.51 – 3.75	Very Satisfying	39	47.57
3	2.00 – 3.50	Satisfying	32	39.02
Total			82	100

In the category, it is known that the student achievement index with a value of 3.76 - 4.00 is a cum laude predicate and the number of students in this category is 11 people with a percentage of 13.41%. The achievement index of 3.51-3.75 is a very satisfactory predicate with 39 students with a percentage of 47.57%. The achievement index of 2.00-3.50 is a satisfactory value predicate with 32 students with a percentage of 39.02%. Based on these data, it can be concluded that the achievement index of biology education students is mostly in the very satisfactory category.

The application of the Kolmogorov Smirnov test is that if the Sig. value <0.05 means that the data to be tested has a significant difference with the standard normal data, meaning that the data is not normal. If the Sig. value >0.05 then there is no significant difference with the standard normal data, meaning that the data is normal [32], [33]. The following are the results of the normality test obtained from the tested variables.:

Table 8. Normality Test Results

Variable	K-SZ	Sig.	Description
Assertive Behavior (X)	0.635	0.815	Normal
Learning Achievement (Y)	0.526	0.945	Normal

Based on the normality test using the Kolmogorov-Smirnov test above, the K-SZ value for variable X (Assertive Behavior) was 0.635 and the K-SZ for variable Y (Learning Achievement) was 0.526. The Asymp.Sig. (2-tailed) value for variable X (Assertive Behavior) was 0.815 and variable Y (Learning Achievement) was 0.945. The results obtained were greater than 0.05 (> 0.05) so it can be concluded that the data is normally distributed.

The linearity test in this study was carried out using variance analysis. The rule used if Sig. > α (0.05), and Fcount < Ftable, then the relationship between the two variables is linear [34], [35]. The conclusion of the linearity test results can be seen in the table below:

Table 9. Linearity Test Results

Correlation	F	Sig.	Deviation	Description
XY	0.539	0.957	0.000	Linear

Based on the table above, the results of the linearity test of Assertive Behavior on Learning Achievement obtained a sig. value of 0.957 > α 0.05 and Fcount < Ftable (0.539 < 3.96) which means the data is linear.

To prove whether or not there is a relationship between Assertive Behavior and Learning Achievement of Biology Education Students, the Pearson Product Moment Correlation formula is used. The following are the results of the correlation test between variables X and Y using Statistical Product And Service Solution (SPSS) version 23.0.

Table 10. SPSS Correlation Test Results

		Assertive Behavior	Learning Achievement
Assertive Behavior	Pearson Correlation	1	.325**
	Sig. (2-tailed)		.003
	N	82	82
Learning Achievement	Pearson Correlation	.325**	1
	Sig. (2-tailed)	.003	
	N	82	82

Based on the calculation results, the results of the calculated r value> r table or 0.325> 0.2172 so that Ha is accepted and Ho is rejected. The KP value is 11% This means that assertive behavior contributes to the learning achievement of Biology Education Students at UIN Alauddin Makassar by 11% and the remaining 89% are other

factors that were not studied by the researcher. It was obtained that t table = 1.990, it turns out that t count is greater than t table or 3.071> 1.990 Thus t count is greater than t table, so H0 is rejected. This means that the original hypothesis about the relationship between variables X and Y is accepted. The conclusion is that there is a significant relationship between Assertive Behavior and the Learning Achievement of Biology Education Students at UIN Alauddin Makassar at a significant level of $\alpha = 0.05$.

The results of the processing of questionnaire data of 82 students who were used as research samples, obtained the highest assertive behavior score of 139 and the lowest 82 so that the class range is 57, the class interval is 7 and the class length is 8. The average score (Mean) obtained is 115 with a standard deviation of 12.25 which means that the data obtained is heterogeneous and tends to have different data between one and another. The results of the assertive behavior categorization obtained show that 25 students with a percentage of 28.04% are in the very high category, 16 people with a percentage of 19.51% in the high category, 28 people with a percentage of 34.15% in the medium category, 10 people with a percentage of 12.20% in the low category, and 5 people with a percentage of 6.10% in the very low category.

This indicates that Biology Education Students Class of 2022 and 2023 of the Faculty of Tarbiyah and Teacher Training, UIN Alauddin Makassar have an average assertive behavior in the moderate category. This means that in general students have the ability to express positive feelings, self-affirmation and express negative feelings which are the main aspects of assertive behavior that are quite good, although not yet optimal. The results of the descriptive statistical analysis of student learning achievement obtained the highest value of 3.93 and the lowest 3.20 so that the class range is 0.73, the class interval is 7 and the class length is 0.10. The average score (Mean) obtained was 3.52 with a standard deviation of 0.16 so that the data obtained was homogeneous and had a tendency for the same data between one and another. The results of the categorization of learning achievement obtained showed that 32 students with a percentage of 39.02% were in the satisfactory category, 39 people with a percentage of 47.57% in the very satisfactory category, and 11 people with a percentage of 13.41% in the cum laude category.

The Achievement Index obtained is the accumulation of all the values of the courses that have been taken which are obtained from documentation from the Biology Education Department. After conducting an inferential statistical analysis using the product moment correlation, the correlation coefficient obtained was rcount = 0.325 ≥ rtable = 0.217, there was a significant correlation even though the correlation was in the low category. The contribution of assertive behavior to learning achievement was 11% and through a significance test, tcount = 3.071 ≥ ttable = 1.990 was obtained. Thus, tcount is greater than ttable, so H0 is rejected. This means that the original hypothesis about the relationship between X and Y is accepted. The conclusion is that there is a significant relationship with a significance level of 5% or ($\alpha = 0.05$).

So the decision of this study is to accept the proposed research hypothesis, namely that there is a relationship between the cost of assertive behavior and the learning achievement of students majoring in Biology Education, Class of 2022 and 2023, Faculty of Tarbiyah and Teacher Training, Alauddin State Islamic University, Makassar. Schools have a large role in shaping behavior, especially assertive behavior [36]. The school aims to produce individuals who are receptive and adaptable to changes, more able to express their opinions, have a sense of responsibility and are more able to express their opinions, have responsibility and are more future-oriented [37], [38]. When someone is educated in a good and quality educational environment, then students or college students will develop their assertive behavior faster. Individuals who have a high level of education are able to be more assertive than those with a low level of education, meaning that the higher the level of education of an individual, the broader their horizons of thinking so that they can develop themselves more openly. Assertive behavior goes beyond just honesty and openness of mind and feelings in interpersonal interactions.

It includes the capacity to interact with full politeness and empathy, where a person not only considers their own interests and feelings, but is also sensitive to the emotions and well-being of others. Developed social skills indicate the ability to adapt in various contexts, becoming a strong foundation in forming social interactions. In this dynamic, strong social relationships play an important role; the better the quality of interpersonal interactions, the more likely the individual is to demonstrate positive and inclusive assertive behavior, creating a supportive environment for everyone involved. The correlation coefficient is in the low category, this can be caused by internal and external factors [39], [40]. The internal factors referred to are the lack of self-confidence that is owned so that it is not yet possible to express its opinion in public, still hesitant and embarrassed in expressing what it wants to convey either in the form of questions or opinions. While the external factors referred to are environmental factors and learning atmosphere. A pleasant learning atmosphere will affect the enthusiasm and mood of students. If a student has a pleasant learning atmosphere, he will have a good enthusiasm for learning and a pleasant mood and be more focused on the learning process so that the student will certainly not hesitate to ask questions or give his opinion. Based on the data obtained, it can be concluded that assertive behavior is one of the factors that influences student learning achievement, there are still many other factors that can influence student learning achievement that have not been studied by researchers.

Based on previous research, it was found that this study found that assertive behavior has a positive and significant relationship with academic achievement [41], [42]. Students who are able to express their opinions

clearly and confidently tend to have higher levels of academic achievement [43]. Furthermore, the study found that assertive behavior has a positive and significant relationship with academic achievement [44], [45]. Students who are able to express their opinions clearly and confidently tend to have higher levels of academic achievement.

This study provides novelty that contributes to the understanding of the relationship between assertive behavior and learning achievement of Biology Education students. Based on the results of the analysis, it was found that although students' assertive behavior as a whole was in the moderate category, there was a significant positive relationship between assertive behavior and learning achievement. This study also revealed that assertive behavior contributed 11% to students' learning achievement, although there were still other factors that were not identified in this study.

The short-term implications of this study are the importance of improving students' assertive behavior in the educational context, because it can affect their academic achievement. Lecturers and education administrators can use these findings to design interpersonal skills training programs that support assertive behavior, which will increase student participation and engagement in learning. In the long term, this study can encourage changes in a more interactive teaching approach, improving the quality of education in higher education by emphasizing the importance of developing students' communication skills. However, this study has several limitations, such as focusing only on Biology Education students, so the results may not be generalizable to all majors. In addition, external factors such as learning atmosphere that can influence assertive behavior were also not fully explored in this study.

4. CONCLUSION

Based on the research results, the assertive behavior of students majoring in Biology Education is generally in the moderate category, indicating that students are able to express positive and negative feelings quite well, although not optimally. Meanwhile, student learning achievement is in the very satisfactory category, with most students showing good academic results. Correlation analysis shows a significant relationship between assertive behavior and learning achievement, although the relationship is in the low category. This shows that assertive behavior contributes to learning achievement, but there are still other factors, both internal such as self-confidence and external such as the learning environment, that also influence student learning outcomes. Therefore, a supportive educational environment and a conducive learning atmosphere are important keys in improving assertive behavior and student learning achievement. Further research is recommended to explore more deeply other factors that influence learning achievement, such as motivation, learning methods, and the role of social support, and use a more varied research approach, such as qualitative or experimental methods to gain a more comprehensive understanding.

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