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Analyzing the Relationship Between Teacher-Student Interaction and Sports Facilities on Academic Achievement

Harri Romadhona¹, Zulfairah²

STIKOM Dinamika Bangsa, Jambi, Indonesia, harrromadhona@gmail.com
Universitas Jambi, Jambi, Indonesia, zulfairah03@gmail.com

Corresponding Author: harrromadhona@gmail.com¹

Abstract: Analyzing the Relationship Between Teacher-Student Interaction and Sports Facilities on Academic Achievement is a literature review article in the field of education. The purpose of this article is to test the hypothesis that positive interactions between teachers and students, as well as adequate sports facilities, contribute to improved student academic achievement. The research sources were drawn from academic online platforms such as Google Scholar, Mendeley, and educational journals. The method used is library research based on open-access e-books and e-journals. The analysis was conducted qualitatively in a descriptive manner. The findings of this article indicate that: (1) Teacher-student interaction affects student academic achievement, and (2) The availability of adequate sports facilities supports student academic achievement.

Keyword: Teacher-student interaction, sports facilities, academic achievement, education, high school students.

INTRODUCTION

The introduction contains a concise, concise, and clear research background; research Education is one of the crucial factors in human resource development, and student academic achievement is a primary indicator of the success of an educational system. High academic performance depends not only on curriculum and teaching methods but also on the quality of interactions between teachers and students and the available facilities at school. Positive teacher-student interactions can create a supportive and motivating learning environment, while adequate sports facilities play an essential role in enhancing students' interest and engagement in learning activities.

Several studies show that effective teacher-student interactions can improve students' motivation to learn and their academic outcomes. According to Sutrisno (2019), a positive relationship between teachers and students encourages students to participate more actively in the learning process. This finding aligns with research by Sari and Rakhmawati (2021), which found that students who feel supported and cared for by their teachers tend to have better academic performance.

On the other hand, sports facilities at school also have a significant impact on students' development. According to Santoso (2020), access to quality sports facilities can enhance students' physical and mental health, positively influencing their academic performance. Adequate sports facilities not only increase student participation in physical activities but also help them develop social and teamwork skills. Based on this background, this study aims to formulate the following research hypotheses:

- 1) Does Teacher-Student Interaction affect Academic Achievement?
- 2) Do Sports Facilities affect Academic Achievement?

METHOD

This study employs a Library Research method and a Systematic Literature Review (SLR). Data was collected through online platforms such as Google Scholar, Mendeley, and various other online academic sources. Systematic Literature Review (SLR) is defined as the process of identifying, evaluating, and interpreting all available research evidence to answer specific research questions (Kitchenham et al., 2009).

This research aims to find technology-based sustainability strategies to enhance corporate profitability. SLR is used to identify various perspectives on this topic and explore relevant theories. In qualitative analysis, literature review must be applied in accordance with its underlying methodological assumptions. One reason for using qualitative analysis is that this research is exploratory in nature (Ali & Limakrisna, 2013).

RESULT AND DISCUSSION

Results

Based on the research background, objectives, and methods outlined, the results of this article are as follows:

Academic Achievement

Academic achievement is an important indicator that reflects students' educational outcomes, encompassing academic abilities measured through exam scores, projects, and other formative assessments. According to Harahap (2020), student achievement is influenced by various factors, including motivation, learning environment, and support from teachers and parents. Highly motivated students tend to be more active in the learning process, which often correlates with their results.

Environmental factors, both physical and social, are also highly influential. Research by Mardiana (2021) shows that a supportive environment where students feel valued and supported can improve academic performance. Additionally, positive social interactions within the classroom can enhance students' sense of belonging and responsibility towards their learning. Therefore, to improve academic achievement, it is crucial for educators to create a supportive learning environment.

Teacher-Student Interaction

Teacher-student interaction is a vital component of the educational process, encompassing communication, emotional support, and interpersonal relationships between teachers and students. Positive interactions can enhance students' confidence and encourage them to engage actively in learning. According to Indah and Pratiwi (2022), teachers who communicate effectively and show attention to students can build strong relationships that positively impact students' motivation to learn.

Research by Fitriani (2020) found that students who feel noticed and supported by their teachers tend to have higher participation in learning activities and are more motivated to achieve good academic results. Moreover, teachers who can establish good relationships with

students not only facilitate more effective learning but also create a harmonious and enjoyable classroom atmosphere. This demonstrates that a positive teacher-student interaction is essential for building a positive learning climate and supporting students' academic success.

Sports Facilities

Sports facilities in schools are an important aspect often overlooked in the educational context, despite having a significant impact on student development. Adequate facilities can increase student participation in physical activities, which in turn contributes to their physical and mental health. According to Sulaiman (2021), access to quality sports facilities not only encourages students to engage in sports but also helps them develop social skills such as teamwork and discipline.

Research by Handayani (2023) indicates that students who regularly engage in sports activities experience lower stress levels and tend to be more focused on learning. Physical activity through sports can enhance blood and oxygen circulation to the brain, which contributes to improved concentration and memory in students. Thus, providing quality sports facilities in schools can be an effective strategy for enhancing not only students' health but also their overall academic performance.

Relevant Article Review

Reviewing relevant articles serves as a foundation for formulating research hypotheses by summarizing findings from previous studies, explaining similarities and differences with the proposed research design, based on relevant previous studies as shown in Table 1 below.

Table 1: Summary of Relevant Research Findings

| No | Author (Year) | Previous Research Findings | Similarities with This Article | Differences with This Article | Hypothesis |
|----|------------------------|--|---|--|------------|
| 1 | Indah & Pratiwi (2022) | Positive teacher-student interaction boosts motivation.. | Teacher-student interaction affects academic achievement. | Focuses more on interaction's impact on motivation, whereas this article links it to academic achievement. | H1 |
| 2 | Fitriani (2020) | Student engagement in learning is influenced by teacher interaction. | Teacher-student interaction affects academic achievement. | Emphasizes engagement, while this article discusses its influence on academic achievement. | H1 |
| 3 | Sulaiman (2021) | Sports facilities contribute to students' mental health. | Sports facilities affect academic achievement. | Focuses on mental health, whereas this article links it to academic achievement. | H2 |
| 4 | Handayani (2023) | Physical activity positively impacts | Sports facilities affect academic | Emphasizes physical | H2 |

| | | | | | |
|--|--|----------------|--------------|--|--|
| | | concentration. | achievement. | activity, while this article links it with academic performance. | |
|--|--|----------------|--------------|--|--|

Discussion

Based on the literature review, the focus of this article’s discussion is to review relevant articles, analyze the relationships between variables, and design a research plan with a conceptual framework. From previous research results, this article’s discussion includes reviewing relevant articles, analyzing variable impacts, and formulating a research plan with a conceptual framework.

Teacher-Student Interaction’s Influence on Academic Achievement

A healthy interaction between teachers and students builds trust and a sense of security for students. Teachers who show care and emotional involvement with their students help create an environment where students feel comfortable participating, asking questions, and taking risks in the learning process. This trust enables students to grow without fear of failure or excessive criticism, ultimately increasing academic engagement and students’ willingness to try new things.

When students feel that their teachers support and pay attention to them, they tend to feel intrinsically motivated to learn and achieve. In contrast, students who feel ignored or underappreciated often experience a decline in motivation and participation. Teachers who actively foster positive interpersonal relationships can facilitate sustained intrinsic motivation, which contributes to better achievement.

As mentioned above, harmonious interaction between teachers and students creates an enjoyable classroom atmosphere. A conducive classroom will facilitate the learning process, where students not only feel motivated but also comfortable sharing ideas and discussing with teachers and peers. This has a significant impact on academic achievement, as a positive atmosphere promotes better comprehension and information processing.

With appropriate support from teachers, students can receive the assistance needed to overcome academic challenges. Teachers who are responsive to students’ needs can help them understand complex concepts, provide encouragement to develop learning skills, and offer guidance tailored to individual needs. This support can directly contribute to improved academic performance.

Overall, positive teacher-student interaction is proven to facilitate various critical aspects of the learning process, such as motivation, engagement, and understanding, all of which directly impact students’ academic achievement. The impact of Teacher-Student Interaction on Academic Achievement has been widely studied by previous researchers, including Arzita & Sumarsih (2018), Febriyanti & Seruni (2015), and Helmiannoor & Rudi (2022).

Impact of Sports Facilities on Academic Achievement

Adequate sports facilities allow students to be more active in physical activities, which positively impacts their physical and mental health. Regular exercise improves blood circulation and oxygenation to the brain, which supports cognitive function and concentration. Physically healthy students are generally better prepared to face academic challenges and are less prone to fatigue and stress, which can positively impact their academic performance.

Education often becomes a source of pressure for students. The availability of sports facilities provides students with an outlet to relieve stress in a healthy way. When students can release stress through physical activity, they become calmer and better prepared to

concentrate on their studies. Research shows that exercise helps reduce stress hormones like cortisol and increases endorphin production, which can help students feel calmer and more positive while studying.

Beyond physical benefits, sports also support the development of essential social skills, such as cooperation, discipline, and leadership. Adequate sports facilities allow students to participate in various team activities, teaching them how to work together, communicate, and adhere to rules. These social skills can enhance students' engagement in class and help them feel more comfortable in a cooperative learning environment.

Sports teach discipline and perseverance, values that can be transferred to the academic context. Through regular physical activity, students learn to set goals and work hard to achieve them. This habit can impact academic performance, as students involved in sports tend to have better study endurance, the ability to face academic challenges, and a tendency to stay motivated to achieve academic goals.

Overall, adequate sports facilities in schools provide holistic benefits, both for students' physical and mental health and for their ability to learn and achieve. Emphasis on sports facilities in schools should be viewed as an important investment in enhancing academic achievement and the overall quality of education. The impact of Sports Facilities on Academic Achievement has been widely studied by previous researchers, including Nur, H. W., Nirwandi, N., & Asmi, A. (2018), Yani, R., Roring, L. A., & Hambali, B. (2023), and Setiawan, J., Jaenudin, R., & Fatimah, S. (2018).

Conceptual Framework of the Research

The conceptual framework of this article is based on the problem statement, discussion, and relevant research, as illustrated in Figure 1.

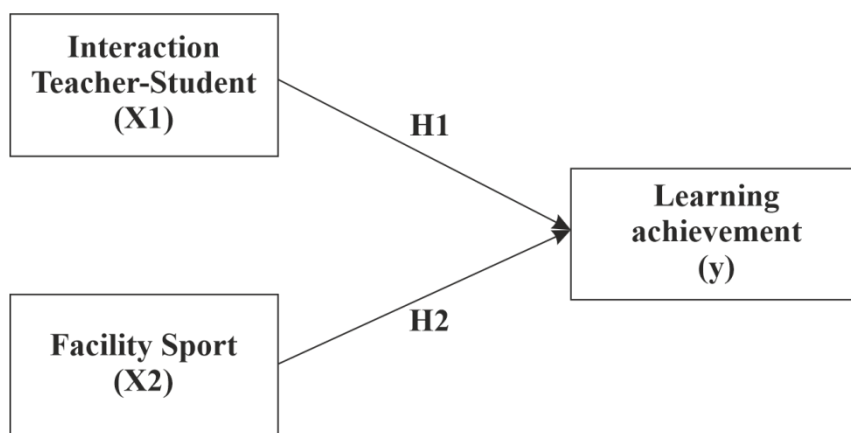


Figure 1: Conceptual Framework

Based on the above conceptual framework, two exogenous variables that influence Learning Achievement are Teacher-Student Interaction and Sports Facilities. In addition to these two variables, there are several other factors, such as:

- 1) **Learning Motivation:** (Rahman, S. 2022, January), (Wahyuni, E. N. 2020), and (Nurmala, D. A., Tripalupi, L. E., Suharsono, N., & Ekonomi, J. P. 2014)
- 2) **Family Environment:** (Iryani, E., Ali, H., & Rosyadi, K. I. 2020), (Wahid, F. S., Setiyoko, D. T., Riono, S. B., & Saputra, A. A. 2020), and (Yanti, Y., & Marimin, M. 2017)
- 3) **Learning Style:** (Abdullah, A., Ali, H., & Rosadi, K. I. 2021), (Papilaya, J. O., & Huliselan, N. 2016), and (Marpaung, J. 2015)

CONCLUSION

Based on the objectives, results, and discussion, the conclusions of this article are to formulate hypotheses for future research, namely:

- 1) Teacher-Student Interaction has an impact on Learning Achievement; and
- 2) Sports Facilities have an impact on Learning Achievement.

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