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Reasons for Students Interest in Learning Physics Subjects in Senior High School

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Abstract

The purpose of this study was to identify the reasons of students' interest in learning physics in Senior High School. This type of research is descriptive qualitative. The data collection method used includes a questionnaire. The questionnaire is in the form of closed questions with a Likert scale from 1-5 addressed to students. This research was conducted in local schools in the city of Semarang that were selected in accordance with the direction and objectives of this research. School A represents superior schools, school B represents mediocre schools, and school C represents non-excellent schools.The results showed that 1) the highest percentage of interest in learning physics was at School A which was 78.72%. Meanwhile, the lowest percentage of interest in learning physics is 46.83% (School C). The percentages are 67.59%, 56.76%, and 55.56%, respectively.

Keywords: questionnaire, interesting way of teaching teachers, qualitative description, interest to learn

INTRODUCTION

According to the National Education System Law No. 20 of 2003, the definition of education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills that needed by himself and society. The education indicator is successful or not will be reflected in the teaching and learning process (Mahyudi 2012).

Learning is defined as a system for providing teaching materials to students about something that is planned, implemented and evaluated systematically (Pathoni 2019). The main goal of the learning process is to instill students' understanding of the subject matter itself (Yuniani 2019). In 21st century learning, there is a paradigm shift where the teaching process is student-centered (Nehru and Syarkowi 2017). Teachers as educators in schools must have the best competence in their field. The increasingly advanced human civilization and existing technology requires teachers to become professionals in carrying out their work. The 21st century learning paradigm emphasizes students' ability to think critically, be able to connect knowledge with the real world, master information communication technology, and collaborate (Ramadhan 2022). Important skills that educators must master in facing 21st century education are digital literacy, inventive thinking, effective communication and high productivity. Smart teachers will be able to think critically in solving problems and be creative and innovative in their work. If this competency is accompanied by the ability to communicate effectively and be able to work together with other people, the teacher will be able to overcome any difficult challenges (Simanjuntak 2019).

There are two factors that influence student learning outcomes, namely internal factors and external factors (Sudjana 1989). Interest in learning is an internal factor which is one of the factors that plays a very important role and is quite important in influencing student learning outcomes. Interest is a person's tendency to feel interested and happy in a particular field (Winkel 1996). Student interests greatly influence learning outcomes, students will not learn as well as possible because the subjects studied do not match the students' interests (Slamento 2010). Interest in learning greatly influences physics learning outcomes (Charli 2019).

Several researchers have conducted research on students' learning interests. Survey results show that students' interest in learning is strongly correlated with learning outcomes in mathematics, physics, German and English (Franzen 2022). The use of multimedia learning applications can influence students' interest in studying physics (Ruf 2022). German secondary school students' interest in learning is influenced by the learning environment (Schweder 2022).

Interest in learning is an important factor in achieving good learning outcomes. Further research needs to be carried out to obtain data on students' interest in studying physics at local senior high schools in were selected in accordance with the direction and objectives of this research in Semarang City. Based on this background, research was conducted entitled "Reasons for Students Interest in Learning Physics Subjects in Senior High School".

METHODS

This type of research data is descriptive qualitative. Qualitative data in the form of interviews and questionnaires. This research was conducted in local schools in the city of Semarang that were selected in accordance with the direction and objectives of this research. School classification is divided into 3. School A represents superior schools, school B represents mediocre schools, and school C represents non-excellent schools. The instrument used in this research is a questionnaire. Questions are written in the Google form and done online with a predetermined time. The questionnaire is in the form of closed questions with a Likert scale from 1-5. The questionnaire functions to obtain data on students' interest in learning physics and the learning process. Interviews were conducted with teachers regarding constraints and descriptions of the learning process.

RESULTS AND DISCUSSION

Before conducting the research, a questionnaire was compiled in the form of closed questions referring to indicators of interest in learning with a Likert scale of 1 to 5. Furthermore, data processing was carried out with Origin software. The results of the data processing are shown in FIGURE 1, FIGURE 2, FIGURE 3, and FIGURE 4. FIGURE 1 shows the results of the questionnaire on student interest in learning at School C, School A, and School B in physics.

From FIGURE 1, the percentage of interest in studying physics at School C, School A, and School B are 46.83%, 78.72%, and 58.87%, respectively. Of the three schools, the highest percentage of interest in learning physics is in School A, which is 78.72%. Meanwhile, the lowest percentage of interest in learning physics was 46.83% (School C). According to Laras and Rifai (2019), interest is defined as the maximum achievement of goals based on individual desires or drives.

According to Fatonah et al. (2020), differences in students' views on physics lessons cause percentage differences in student interest in learning at School C, School A, and School B. Students who have an interest in studying physics subjects have a positive view of physics lessons, on the other hand students who are not interested in physics lessons will have a negative view of physics lessons (Fatonah et al. 2020). This statement is also supported by Sirait (2016), the main factor that determines the degree of student activity is the amount of student interest in the subject. The results of other research show that the characteristics of students, namely gender and socio-economic status, have an effect on students' motivation in mathematics and English (Jiang and Zhang 2023).

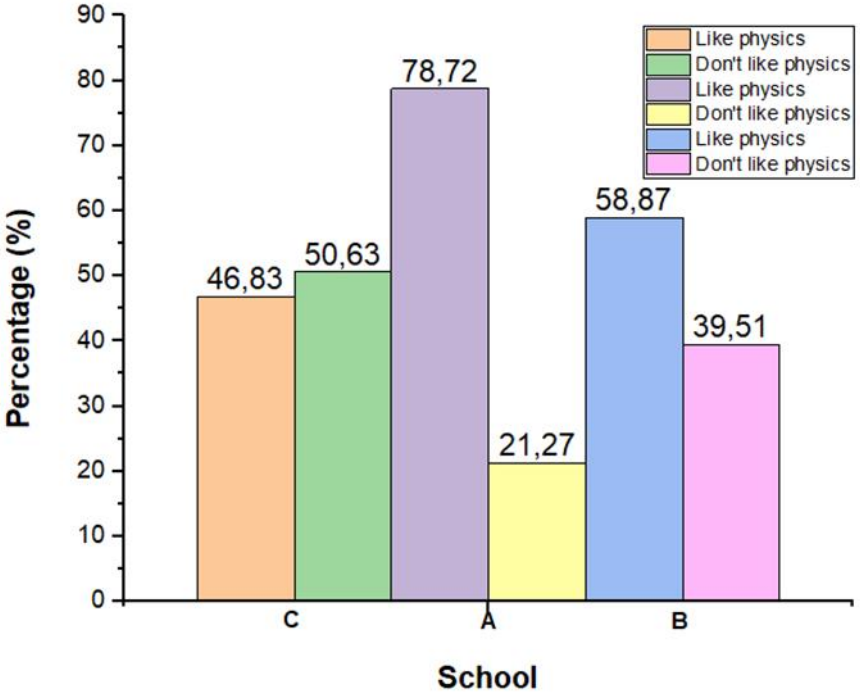

FIGURE 1. Percentage of Interest in Studying Physics for Students of School C, School A and School B

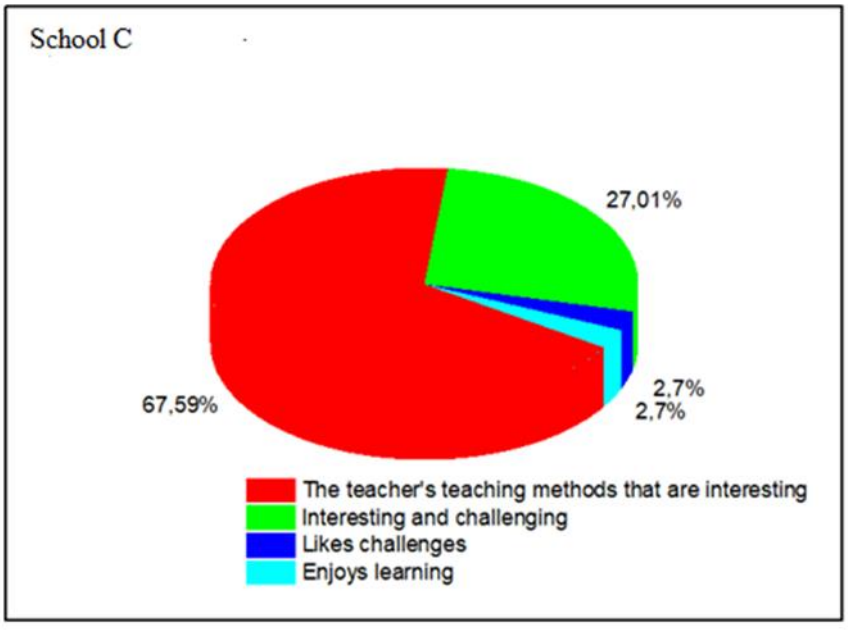

FIGURE 2. Percentage of Reasons for Interest in Learning Physics of School C Students

FIGURE 2 shows the percentage of reasons for student interest School C in physics. The largest to the smallest percentages, respectively, are the teacher's teaching methods that are interesting (67.59%), interesting and challenging (27.01%), likes challenges (2.7%), and enjoys learning (2.7%).

The percentage of reasons for interest in learning physics at School A is shown in FIGURE 3. The largest to the smallest percentages, respectively, are interesting ways of teaching teachers (56.76%), interesting and challenging (35.14%), the concepts can be implemented in everyday life. (2.7%), did not give reasons (2.7%) and could understand better (2.7%).

FIGURE 4 shows the percentage of reasons for students' interest in learning at School B in physics. The largest to the smallest percentages, respectively, are the teacher's way of teaching which is interesting (55.56%), interesting and challenging (38.89%), I like it (1.39%), like it because it is related to everyday life (1.39%), I like physics and understand the material (1.39%) and the teacher is very good (1.39%).

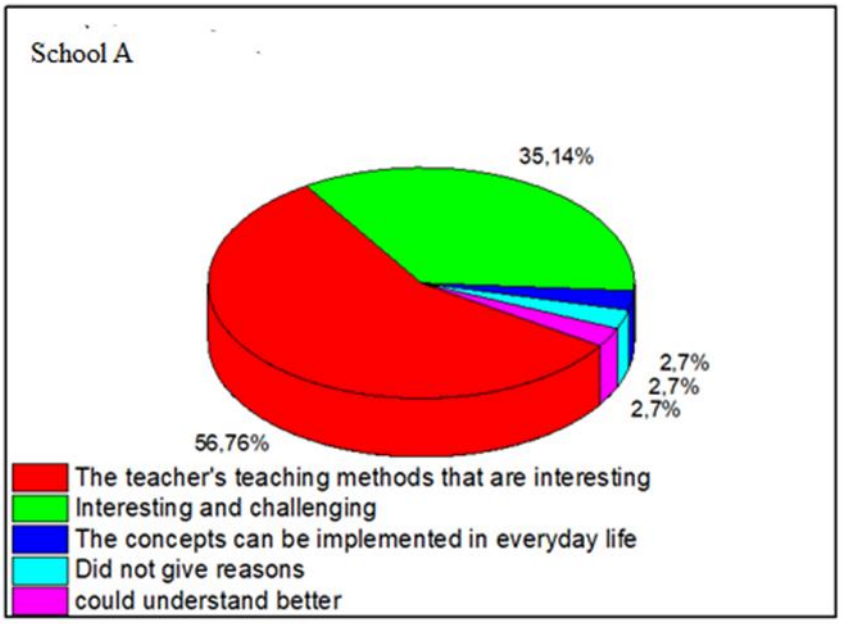

FIGURE 3. Percentage of Reasons for Interest in Studying Physics in School A

FIGURE 2, FIGURE 3, and FIGURE 4 show the largest percentage of reasons for student interest in learning at School C, School A, School B is an attractive teacher teaching method. The percentages are 67.59%, 56.76%, and 55.56%, respectively. From FIGURE 2, FIGURE 3, and FIGURE 4, the attractive way of teaching teachers is the biggest reason why students from School C, School A, School B like physics.

These results are supported by research conducted by Mahyudi (2012) which states that the teaching style of physics teachers has a positive effect on students' interest in learning physics. Students' interest in learning physics will increase if there are many variations (teaching styles) of teachers to students. The variety of teaching styles or motivation of a teacher is one of the most important factors in learning physics so that a good and appropriate reinforcement is needed from a teacher to increase a sense of passion, security, enthusiasm, and feelings of pleasure for students in studying physics so that it can increase interest in learning. students in physics lessons (Mahyudi 2012).

The results of Yolviansyah et al. (2020) research also show that student interest in learning also depends on how the teacher teaches. Apart from the teacher's teaching style, STEM education has an important role in fostering student motivation in mathematics and science subjects (Fong et al. 2021). In addition, research conducted by Ruf et al. (2022) showed that high-quality interfaces support learning and expressive aesthetic design features that foster an interest in studying physics at the senior high school level in Switzerland.

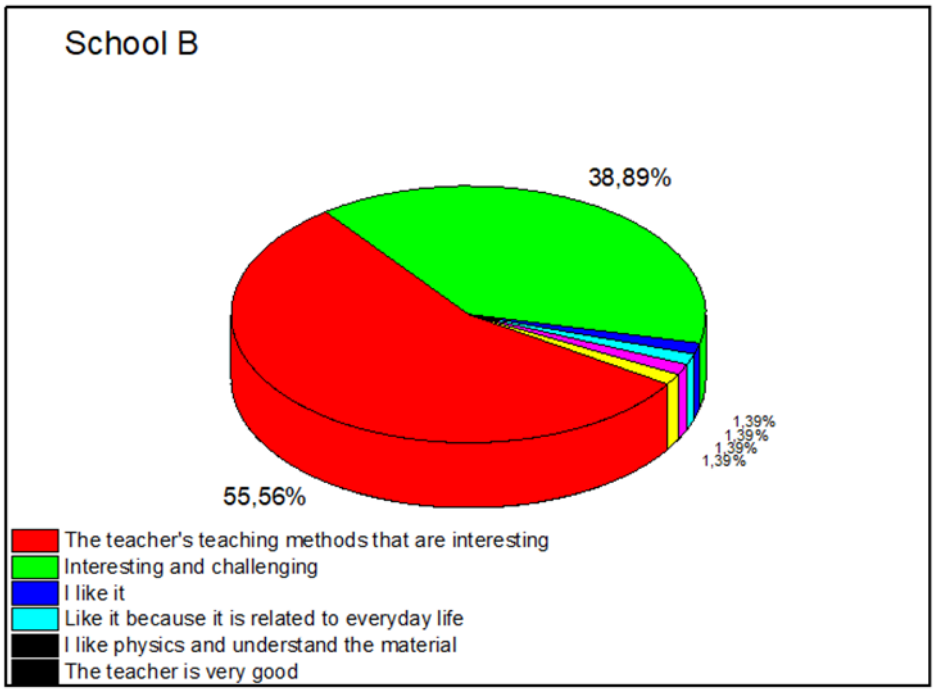

FIGURE 4. Percentage of Reasons for Interest in Studying Physics at School B

CONCLUSION

The conclusion of this study is that the largest percentage of interest in learning physics in School A is 78.72%, meanwhile in School C students who are interested in studying physics and those who are not interested in studying physics show almost the same percentage, respectively, namely 46.83% and 50.63 %. There are several factors that affect students' interest in learning, namely the teacher's style of teaching, STEM education, expressive aesthetic design features, and high-quality interfaces.

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