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Analysis of Student Perceptions of Teacher Quality and Learning Environment as Predictors of Learning Motivation in High Schools

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Abstract

Learning is an activity that is very important to carry out, especially for high school students. In practice, the student's motivation often determines success in learning. Therefore, high school students' motivation needs to be increased to study well. The researcher was then interested in seeing how high school students' perception of teacher quality and learning environment affect their motivation to learn. This research will be carried out using a descriptive qualitative approach. The data to be used in this study comes from various research results and previous studies, which still have relevance to the discussion in this study. The results of this study then found that teacher quality can increase learning motivation for high school students. This is because a good teacher will make it easier for high school students to understand what they are learning, so learning motivation will increase even higher. Then a good learning environment can also increase high school students learning motivation. This is because, with a few distractions, students can focus on learning well. The learning process at home through e-learning often causes a learning environment full of distractions, so high school students learning motivation decreases extensively.

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Belajar merupakan kegiatan yang sangat penting untuk dilakukan, terutama bagi siswa sekolah menengah. Dalam praktiknya, motivasi siswa seringkali menentukan keberhasilan dalam belajar. Oleh karena itu, motivasi siswa SMA perlu ditingkatkan untuk belajar dengan baik. Peneliti kemudian tertarik untuk melihat bagaimana persepsi siswa SMA terhadap kualitas guru dan lingkungan belajar mempengaruhi motivasi belajar mereka. Penelitian ini akan dilakukan dengan menggunakan pendekatan kualitatif deskriptif. Data yang akan digunakan dalam penelitian ini berasal dari berbagai hasil penelitian dan penelitian sebelumnya yang masih memiliki relevansi dengan pembahasan dalam penelitian ini. Hasil penelitian ini kemudian menemukan bahwa kualitas guru dapat meningkatkan motivasi belajar siswa SMA. Hal ini dikarenakan guru yang baik akan memudahkan siswa SMA memahami apa yang dipelajarinya, sehingga motivasi belajar akan meningkat lebih tinggi lagi. Kemudian lingkungan belajar yang baik juga dapat meningkatkan motivasi belajar siswa SMA. Hal ini dikarenakan dengan sedikit distraksi, siswa dapat fokus belajar dengan baik. Proses pembelajaran di rumah melalui e-learning seringkali menyebabkan suasana belajar yang penuh dengan gangguan, sehingga motivasi belajar siswa SMA menurun drastis.

I. INTRODUCTION

Pancasila is the foundation of national education, and the 1945 Constitution of the Republic of Indonesia aimed at developing capabilities and forming a dignified national character and civilization in the context of educating the nation's life, as well as creating the potential for students to become human beings who believe in and fear God Almighty, have a noble character, are healthy, knowledgeable, capable, creative, independent, and become citizens of a democratic and responsible society

(Arifin, 2021). As a developing country, Indonesia urgently needs creative workers capable of making meaningful contributions to science, technology, and the arts, as well as to the welfare of the nation in general. In this regard, education should focus on developing students' creativity so they can later meet personal, community, and state needs (Matthess & Kunkel, 2020).

Education is human activity and effort to improve his personality by cultivating personal potential, both physical potential and spiritual potential. Physical potential includes the ability

12

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or skill to use the five senses, while spiritual potential includes thinking, creativity, intention, taste, and reason. Education also means an institution responsible for setting the ideals or goals of education, content, system, and organization. The educational institutions in question are the family, school, and community. Education is a pattern of results or achievements achieved by human development and the institution's efforts to achieve its goals. According to John Lock, with the theory of "Tabularasa", each individual is born like a white paper, and the environment determines one's personal development (Widodo, 2019).

Education is essential and cannot be separated from one's life in the family, community, and nation. The success rate of education determines the progress of a nation. A nation's success will be achieved if there is an effort to improve the quality of education in the nation itself (Ladson-Billings, 2021). Government policy is to improve the quality of human resources by enhancing the quality of education. In the education sector, systematic efforts are required for this reason. Education is the responsibility of the government and a shared obligation of parents and society. Education in the current global era demands human resources who can excel and be competitive, considering that advances in information, communication, and transformation technology have extraordinarily influenced aspects of people's lives (Riinawati, 2021).

In efforts to increase the quality of formal education, the teacher plays a significant role in the attainment of these educational objectives. As learning agents, teachers are supposed to facilitate the learning process as effectively as possible within the context of educational growth. Teachers have a crucial function and part in the growth of the education sector, and as a result, their profession must be elevated. Law No. 14 of 2005 concerning Teachers and Lecturers Article 4 confirms that "teachers as learning agents function to improve the quality of national education. To carry out its functions properly, teachers are required to have certain requirements, one of which is competence". Competence is a description of the qualitative nature of a person's behavior. Competence is the capacity to do something, which is achieved from the learning process. During the learning process, the stimulus will combine with the contents of the memory and cause a change in the capacity to do something. If a student is more successful in learning how to do a complex job than before,

then there must have been a change in competence in that individual. Changes in competence will not appear if there is no interest or opportunity to do so. Thus it can be interpreted that competence lasts a long time which causes students to be able to perform specific performance (Queiruga-Dios et al., 2020).

Apart from the teacher, the learning environment can also affect whether or not students are good at learning. Educational activities wherever always take place in a particular environment. There are three kinds of environments according to where educational activities take place: family, school, and community. According to Ahmadi, schools play an essential role in education because they hugely influence a child's soul. Schools as formal education are designed in such a way as to be more effective and efficient, that is, they are classical or tiered in nature. The classical system allows several/several children to study together and be led by one or several teachers as facilitators (Simamora, 2020). Walgito stated that when talking about the learning environment in schools, it will discuss issues related to place, tools for learning, atmosphere, time, and association. Within the school environment, teaching and learning activities can be carried out in or outside the classroom. The state of a good school environment can increase student motivation in learning (Nasution et al., 2021).

Based on the brief discussion above, the researcher wanted to see how students' perceptions of the quality or competence of teachers and the learning environment affect motivation in learning activities.

II. METHOD

This research will be carried out using a qualitative approach. The research data will be analyzed through descriptive analysis methods. Meanwhile, the data that will be used in this study comes from mixed results of previous studies and studies that still have relevance to the science of this research. The research data that was successfully collected will be processed immediately so that later the results of this research can be found.

III. RESULT AND DISCUSSION

A. The Role of Motivation in the Learning Process of High School Students

In learning behavior, there is motivation to learn. This motivation can come from within the child or is intrinsic, and it can also come from outside the child or extrinsic motivation. Strengthening these learning motivations is in

the hands of teachers/educators and other community members. The teacher, as an educator, is tasked with strengthening learning motivation. Parents are also tasked with strengthening learning motivation while their children are at home, which lasts a lifetime. Psychologists and researchers produce many motivational theories about behavior. Subjects studied in motivation are in the form of animals, and there are in the form of humans. Researchers who use animals are classified as biological researchers and behaviorists, while researchers who use human research are cognitive. The findings of these experts are helpful for the fields of industry, labor, marketing affairs, recruiting, military consultancy, and education.

According to researchers, human conduct is motivated by mental forces, instincts, desires, needs, cognitive processes, and interactions. Humans' most crucial behaviors are learning and working. Students' minds evolve as a result of their education. Work creates something useful to one's own and others' conduct. Motivation to study and work is a driving force for the progress of society. Both motivations need to be owned by students, while teachers are required to strengthen student motivation. Learning motivation is essential for students and teachers, for students, the importance of learning motivation is as follows:

1. Make students aware of the position at the beginning of learning, processes, and learning outcomes.
2. Informs about the power of learning effort compared to peers.
3. Directing learning activities.
4. Raise the spirit of learning.
5. Be aware of the existence of a learning journey and then work.

Learning motivation is also crucial for teachers to know because knowledge and understanding of student motivation are helpful for teachers to:

1. Generate, improve, and maintain students' enthusiasm for learning to succeed.
2. Knowing and understanding students' learning motivation in various classes, some are indifferent, some don't get attention, and some believe, besides being eager to learn.
3. Improving and making teachers aware of choosing roles such as advisor, facilitator,

instructor, discussion partner, encourager, gift giver, or educator.

4. Provide opportunities for teachers to work on pedagogical engineering. The teacher's job is to make students learn until they succeed. Regarding his profession, it lies in changing students who are not motivated to become eager to learn.

B. Student Perceptions Regarding Teacher Quality on Learning Motivation

Students' perceptions of teacher competence quality will certainly influence learning motivation. This is because the teacher's role is oriented as a leader of learning activities in the classroom and the teacher must plan, organize, implement, supervise, and evaluate the learning. Teachers must have skills in conveying information and strategies following the conditions of student characteristics so that competency goals are achieved optimally. Educators must be ready to face the impact of social, political, and cultural transformation. Through qualified teachers, student learning motivation will increase, which can play an important role in achieving high school student achievement because motivation is an impetus that moves students to want to follow the learning process. Motivation is a change in energy in a person (personal), characterized by the emergence of feelings and reactions to achieve goals. The teacher, as a facilitator, has an essential role in paying attention to his students and exploring student learning motivation.

Following the opinion of Samijo and Mardiani, "every motivation is closely related to the goals that generate activities and has three functions, namely: encouraging people to act, determining the direction and goals to be achieved, investigating and determining the actions that must be carried out to achieve the goals". The role of teacher quality in increasing student learning motivation in schools should be of concern to all parties involved in education because motivation generally influences student achievement. Then according to Irwanto, among the factors that influence perception is effective attention. Because not all stimuli that are captured become the center of attention, but only interesting stimuli are the center of attention. Therefore, it is hoped that a teacher will be able to give an interesting impression, be able to master teacher competencies, namely

pedagogic competence, social competence, personal competence, professional competence, and leadership competence, so that with these impressions and competencies can make a teacher a model that will generate learning motivation for students.

The theory also reinforces this, according to Sardiman, that motivation is classified into two groups, intrinsic and extrinsic. Intrinsic motivation refers to motivations that become active or work without the need for external stimulation, as there is an innate desire to perform something within every human. While extrinsic motivation is a sort of motivation in which behaviors are launched and maintained in response to encouragement from outside sources that are unconnected to the individual. Among them is the perception of a teacher who will give a distinct impression to a student. So that the results of observations made by students about teacher competence carried out by the five senses will be processed by the minds of each individual, causing a reaction.

C. Learning Environment and Learning Motivation for High School Students

As members of society, students can be affected by the surrounding environment. Therefore, healthy environmental conditions also influence learning motivation. According to Uno, primary personal motives appear in individual actions after being shaped by environmental influences. Therefore an individual's motive to do something, for example, to study well, can be developed, improved, and changed through learning and practice, in other words, through environmental influences. According to Slamet, in the learning process, one must pay attention to what can encourage students to study well or have motives to think and focus, plan, and carry out activities related to supporting learning.

Learning motivation can be instilled in students by providing exercises or habits, which are sometimes also influenced by environmental conditions. A teacher must be able to generate student learning motivation so that learning goals can be achieved. Creating a conducive environment for student learning is one of the efforts made by the teacher to develop student learning motivation. Providing regular exercises to students can increase student readiness for learning. Habits instilled by the teacher can create

conditions for a good student learning environment. If students are in an environment that is aware of the importance of education, students will be motivated to study hard. So that the motivation for learning arises. Motivation is not innate from birth, but motivation appears later after students are aware of the importance of learning. Motivation will lead to persistent, serious, and not easily discouraged efforts in facing challenges because they are interested and like them. If students desire to learn, they will quickly understand and remember it. Students will study seriously, promptly know and understand lessons and find ways to solve tasks they don't understand because they are interested in learning.

Motivation tremendously influences learning outcomes because if students do not have motivation, they will not study well because it is not interesting for them. So that in stimulating student learning motivation, the learning environment is very influential in improving student achievement. Motivation is also a driving force for mastering certain knowledge/subjects, if students already have motivation, students will be willing to learn without any burden and coercion in learning. In children's lives, the environment does not always positively influence children's education. This is because some customs and behaviors are good in that life, and some are not. Good behavior will motivate children's psychological development; conversely, bad behavior influences unfavorable behavior toward children. Sometimes children change themselves according to environmental conditions, and sometimes children change the environment according to circumstances (desires). Individual behavior is also controlled by the stimulus and response given by the individual, strengthening the stimulus-response relationship is a learning process that causes a behavior change, in this behavior change, the teacher plays a crucial role because the behavioral approach starts from the teaching stage (strategy).

The negative impact of the environment on learning motivation can be seen in the teaching and learning activities carried out remotely. The conditions of a conducive learning environment can form a calm and exciting environment to stimulate the openness of students' hearts in receiving various educational inputs and influences. During the

Distance Learning (PJJ) period, a conducive learning environment must also be supported by multiple facilities and means, such as gadgets and adequate signal availability. Therefore, it is necessary to improve the quality of the learning environment to increase the motivation to study in high school students. The condition of the learning environment that demands high school students to carry out distance learning causes all lecture activities to be carried out at their respective homes. This causes educators to be unable to accompany high school students directly, so giving prizes, punishments, and feedback to high school students is limited, even though such actions can trigger intrinsic motivation in high school students.

In addition, distraction or diversion in the learning environment is also a cause of decreased motivation to learn in high school students. Distractions are experienced in the form of poor internet access in the home environment and noise caused by people at home or neighbors. The conditions of the learning environment at school and home are different. The condition of the learning environment at home that is not conducive will cause students not to have the motivation to learn and not focus on mastering knowledge and developing skills to the fullest.

IV. CONCLUSION AND SUGGESTION

A. Conclusion

Motivation is beneficial for students, namely, awakening students' position at the beginning of learning, learning processes, and results, informing about the strength of learning efforts compared to peers, directing learning activities, raising enthusiasm for learning, making awareness about the existence of a learning journey and then working. Good teacher quality is one factor that has a significant role in the learning motivation of high school students. The teacher has a dominant role in overcoming student problems related to understanding the information received, so the better the quality of the existing teachers, the easier it is for high school students to understand this new information which will ultimately increase students' motivation in learning. Then a good learning environment can also have a significant role in high school students learning motivation. This is because in approximately 6 hours or more, high school

students carry out learning activities. The teacher and the people in the learning environment primarily determine the formation of learning motivation in the learning environment. Facilities and infrastructure are also needed to help establish student motivation. Meanwhile, a learning environment that is not good, such as studying from home during e-learning activities, can provide a lot of distractions, which can lead to reduced motivation of high school students in learning.

B. Suggestion

Discussion regarding this research is still very limited and requires a lot of input. Suggestions for future authors are to examine more deeply and comprehensively about Analysis of Student Perceptions of Teacher Quality and Learning Environment as Predictors of Learning Motivation in High Schools.

REFERENCES

- Adriani, Z., & Hikmah, N. (2022). Human Resources in Education: Training and Work Motivation on Teacher Performance. *Indonesian Research Journal in Education/ IRJE*, 6(1), 170-182.
- Afianti, D., Adi, B. S., & Wijayanti, I. D. (2022). Student Motivation in Online Learning for Advanced Civics Courses. *Al-Ishlah: Jurnal Pendidikan*, 14(4), 4821-4828.
- Arifin, A. (2021). Internalization of Pancasila Values and Nationalism in High Schools through Citizenship Education. *Al-Ishlah: Jurnal Pendidikan*, 13(3), 1899-1908.
- BK, M. K. U., & Hamna, H. (2021). The Effectiveness of Jigsaw Learning Model by Using Numbered Cards: Strategy for Increasing Mathematics Learning Motivation Students in Elementary School. *Pedagogik Journal of Islamic Elementary School*, 4(1), 1-18.
- Boca, G. D. (2021). Factors influencing students' behavior and attitude towards online education during COVID-19. *Sustainability*, 13(13), 7469.
- Carvalho, L., Nicholson, T., Yeoman, P., & Thibaut, P. (2020). Space matters: Framing the New Zealand learning landscape. *Learning Environments Research*, 23, 307-329.

- Funder, D. C., & Ozer, D. J. (2019). Evaluating Effect Size in Psychological Research: Sense and Nonsense. *Advances in Methods and Practices in Psychological Science*, 2(2), 156-168.
- Guan, J. Q., Wang, L. H., Chen, Q., Jin, K., & Hwang, G. J. (2021). Effects of a Virtual Reality-Based Pottery Making Approach on Junior High School Students' Creativity and Learning Engagement. *Interactive Learning Environments*, 1-17.
- Irawati, R. R., & Zamroni, Z. (2020). The Effect of Multicultural Attitude, Learning Style, and Parents' Job on the Learning Achievement Of The Students. *Harmoni Sosial: Jurnal Pendidikan IPS*, 7(2), 160-169.
- Khaidir, E., & Suud, F. M. (2020). Islamic Education in Forming Students' Characters at As-Shofa Islamic High School, Pekanbaru Riau. *International Journal of Islamic Educational Psychology*, 1(1), 50-63.
- Ladson-Billings, G. (2021). I'm Here for the Hard Re-Set: Post Pandemic Pedagogy to Preserve Our Culture. *Equity & Excellence in Education*, 54(1), 68-78.
- Lubis, M., Hasibuan, M. A., & Andreswari, R. (2022). Satisfaction Measurement in the Blended Learning System of the University: The Literacy Mediated-Discourses (LM-D) Framework. *Sustainability*, 14(19), 12929.
- Mat Lazim, S. H. I., Arifin, K., Abas, A., Khairil, M., Ali, M. N., Lampe, I., ... & Ciyo, M. B. (2022). A Systematic Literature Review on Leadership Practices for Safety in the Education Sector. *Sustainability*, 14(14), 8262.
- Matthess, M., & Kunkel, S. (2020). Structural Change and Digitalization in Developing Countries: Conceptually Linking the Two Transformations. *Technology in Society*, 63, 101428.
- Nasution, M. R., Mesiono, M., & Hadijaya, Y. (2021). Management of the Academic Potential of Students during the Covid-19 Pandemic. *Nidhomul Haq: Jurnal Manajemen Pendidikan Islam*, 6(2), 470-482.
- Nunes, E. J., Kebede, N., Bagdas, D., & Addy, N. A. (2022). Cholinergic and Dopaminergic-Mediated Motivated Behavior in Healthy States and in Substance Use and Mood Disorders. *Journal of the Experimental Analysis of Behavior*, 117(3), 404-419.
- Permana, R. S. G., Roni, M., Rahmawati, W., & Susanto, S. (2022). Building Joyful Learning to Enhance Students Motivation in Studying English. *Attractive: Innovative Education Journal*, 4(2), 138-143.
- Queiruga-Dios, M. Á., López-Iñesta, E., Díez-Ojeda, M., Sáiz-Manzanares, M. C., & Vazquez Dorrio, J. B. (2020). Citizen Science for Scientific Literacy and the Attainment of Sustainable Development Goals in Formal Education. *Sustainability*, 12(10), 4283.
- Rahmatullah, A. S., Mulyasa, E., Syahrani, S., Pongpalilu, F., & Putri, R. E. (2022). Digital era 4.0: The Contribution to Education and Student Psychology. *Linguistics and Culture Review*, 6(S3), 89-107.
- Rianawati, R., Mentari, D., & Tursina, N. (2020). Role of Teachers as Motivators in Learning Islamic Religious Education in Elementary School of Negeri 05 Pontianak Timur. *International Journal for Educational and Vocational Studies*, 2(5).
- Riinawati, R. (2021). Education Financial Management during Covid-19 Pandemic of Islamic Universities in South Kalimantan. *Dinamika Ilmu*, 383-396.
- Sandi, H., Yunita, N. A., Heikal, M., Ilham, R. N., & Sinta, I. (2021). Relationship between Budget Participation, Job Characteristics, Emotional Intelligence and Work Motivation as Mediator Variables to Strengthening User Power Performance: An Emperical Evidence from Indonesia Government. *Morfai Journal*, 1(1), 36-48.
- Simamora, R. M. (2020). The Challenges of Online Learning during the COVID-19 Pandemic: An Essay Analysis of Performing Arts Education Students. *Studies in Learning and Teaching*, 1(2), 86-103.
- Sulihin, S., Asbar, A., & Elihami, E. (2020). Developing of Instructional Video Media to Improve Learning Quality and Student

- Motivation. *Edumaspul: Jurnal Pendidikan*, 4(2), 51-55.
- Tripathi, S., & Bajpai, A. (2021). Living in today's world: Reflections on the Interactions between Technology and Human Relational Patterns. *Technology in Society*, 67, 101706.
- Widodo, H. (2019). The Role of School Culture in Holistic Education Development in Muhammadiyah Elementary School Sleman Yogyakarta. *Dinamika Ilmu*, 265-285.
- Zhang, W., & Bray, M. (2020). Comparative research on shadow education: Achievements, challenges, and the agenda ahead. *European Journal of Education*, 55(3), 322-341.

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