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The Influence of Educational Technology, Social Interaction and Learning Style on Learning Outcomes with Learning Interest as An Intervening Variable in Class X Students in Madrasah Aliyah Negeri 1 Makassar City

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ABSTRAK

This research aims to gain knowledge and understanding regarding the influence of educational technology, social interaction and learning styles on learning outcomes with interest in learning as an intervening variable in class X students at Madrasah Aliyah Negeri 1 Makassar City. The method used is quantitative research techniques with descriptive research type. The sample in this study was 113 class X students. Data analysis used the Partial Least Square Structural Equation Model (PLS-SEM). The research results obtained were that Educational Technology, Social Interaction and Learning Style had a significant effect on the Learning Outcomes of class X students. Interest in Learning was able to mediate Educational Technology on Learning Outcomes. Interest in Learning is able to mediate Social Interaction on Learning Outcomes. Learning Interest is able to mediate Learning Style on Learning Outcomes.

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1. INTRODUCTION

Education is an important mechanism for developing the quality of citizens. Any country with better quality citizens allows the country to progress faster and be more competitive than other countries. Nitjarunkul (2015) stated that one of the main keys to improving the quality of citizens is education. According to Article 3 of Law Number 20 of 2003, the National Education System has the purpose of enhancing skills and molding the values and culture of a respected nation, with the aim of improving the intellectual capacity of the nation. Education is a crucial component of human existence. Ideal education does not only develop students' talents according to the knowledge they learn in class, but also improves the quality of humans who are obedient and devoted to God Almighty, have noble character, personality, independence and creativity (Dewi & Primayana, 2019).

Student learning outcomes refer to the academic successes that students attain through tests and assignments, as well as their active participation in asking and answering questions that contribute to the attainment of these learning outcomes (Wang et al., 2021). Within academic circles, there is a common notion that a student's educational achievement is not just decided by their marks on a report card or graduation. Instead, the extent of performance in the cognitive domain may be gauged by assessing a student's learning outcomes. Learning outcomes are an important indicator of the effectiveness of educational programs and can be influenced by various factors in the educational environment (Caspersen & Smeby, 2021). Student learning outcomes can be influenced by several factors such as inappropriate use of technology, lack of interaction between students or teachers and less efficient learning styles applied in the classroom, making students lazy in taking these subjects.

Educational technology has benefits in creating an active learning environment in both online and face-to-face classrooms (Amey & David, 2020). Educational technology, defined broadly as both hardware and software that supports educational goals, is not a new approach to teaching (Delgado et al., 2015). Technology has changed the way people work, since technology has become a supporting tool that improves individuals' work and personal activities and transforms them into more efficient people (Stolpe & Hallström, 2024). Additionally, technology provides solutions for more effective monitoring and evaluation of student progress, forming the foundation for responsive and inclusive education in this digital era.

Interaction refers to the process of communication and the establishment of connections between people, as well as between individuals and groups, and among different groups. Communication often arises from the need to transmit a message, but social interactions encompass the relationships between all individuals. From these social interactions, students have a high sense of social awareness (Nora et al., 2022). Social interactions in the classroom, both in person and via online platforms, provide students with opportunities to collaborate, exchange ideas, and broaden their horizons. Social interactions help students develop social, emotional, and communication skills that are important in improving their learning outcomes (Waber et al., 2021). Positive relationships between students, teachers, and peers can provide the emotional support needed to overcome challenges in learning (Howard et al., 2022). Collaboration in group activities, class discussions, and joint projects encourages student engagement, broadens their understanding, and develops collaboration skills (Kang & Park, 2023). Social support from peers and teachers creates a positive environment that supports improved learning outcomes.

Learning style refers to the characteristics and preferences of students (Dewi & Primayana, 2019). Understanding good learning styles can help create a more effective learning experience. Teachers who teach with learning styles as a basis more often adapt to students' learning preferences, collaborate and reflect more with their colleagues, are more development-oriented and more open to change compared to those who do not use learning styles as the basis of pedagogy (Boström, 2011).

Interest in learning is a very important aspect in learning (Cheung, 2018). With interest in learning, it will increase students' attention in learning. Interest in learning is a psychological factor that greatly influences an individual's learning process. This includes the extent to which a person has interest, enthusiasm and motivation towards the learning material. Interest in learning plays a crucial role in shaping student behavior, because students who have high interest tend to be more diligent, active, and strive to achieve deep understanding (Hasanati & Purwaningsih, 2021). Interest in learning is not only about interest in certain topics, but also involves the urge to explore, understand and master knowledge in more depth. Educators who understand educational technology, social interaction and learning styles can stimulate students' interest in learning in creating a learning environment that supports the development of positive and sustainable learning outcomes.

2. RESEARCH METHODS

Using a five-point Likert scale with answers ranging from "strongly disagree" (1) to "strongly agree" (5), all factors were tested in this quantitative research. All data for this study was collected in a two-part questionnaire that was created by the researcher. The first part contains directions for filling out the questionnaire, an explanation of the basic motivation for the research, and questions regarding the respondent's identity, including name, gender, age and class.

Five indicators are used to test the Educational Technology variable about digital risks and ethics, including data security and privacy, (5) Skills in communicating and collaborating using digital tools and social media. Five indicators are used to test the Social Interaction variable X2: (1) Cooperation, (2) Providing support or motivation, (3) Openness, (4) Empathy, (5) Conversation. Five indicators were used to test the Learning Style variable) Weak in verbal activity. Five indicators are used to test the Learning Outcome Y variable: (1) Intellectual abilities, (2) Cognitive strategies, (3) Verbal information, (4) Motor skills, (5) Attitude. Five indicators are used to test the variable Interest in Learning Z: (1) There is a feeling of enjoyment towards learning, (2) There is a concentration of attention and thought towards learning, (3) There is a willingness to learn, (4) There is a desire from within oneself to actively learn, (5) There are efforts made to realize the desire to learn.

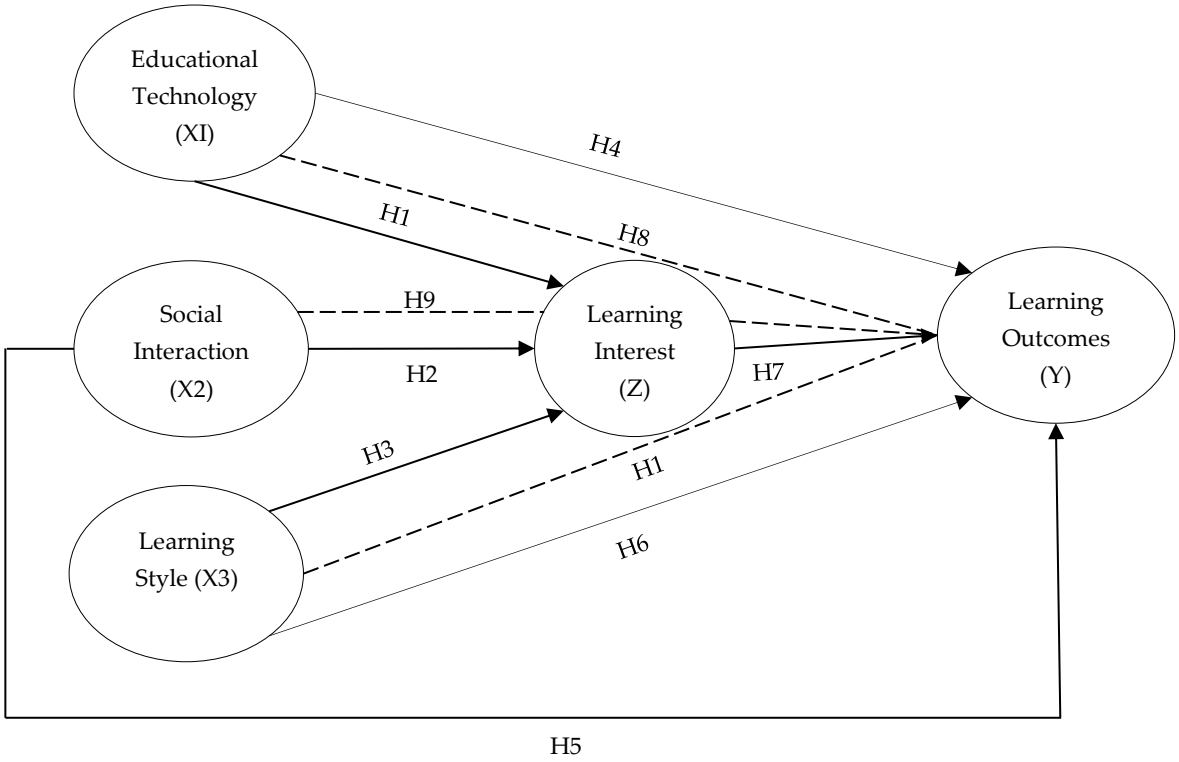

Figure 1. Framework of Thought Scheme

The population of this research was 403 class X students at MAN 1 Makassar City. Based on calculations using the Slovin formula, this study used a population of 113 people with a minimum sample limit of at least 98 people. This research uses a probability sampling method with simple random sampling. The following is a table of the population and sample of class X students at MAN 1 Makassar City.

Table 1. Population and Sample in MAN 1 Makassar City

Class X	Population	Sampel	Persentase %
X.1	37	10	27,02%
X.2	37	10	27,02%
X.3	37	11	29,72%

X.4	37	10	27,02%
X.5	36	11	30,55%
X.6	37	10	27,02%
X.7	37	10	27,02%
X.8	36	10	27,77%
X.9	37	10	27,02%
X.10	36	10	27,77%
X.11	36	11	30,05%
Total	**403**	**113**	**28,03%**

3. RESULTS AND DISCUSSION

Table 2 presents the characteristics of respondents. Referring to the table, it can be seen that the respondents in this study were class X students at MAN 1 Makassar City, dominated by those aged 16 years and dominated by women. Participants with the highest age were 16 years old with a percentage of 57.52%. In addition, the respondents from this study were spread from various classes.

Table 2. Characteristics of Respondents

	Aspect	Frequency	Percentage (%)
1.	**Gender**		
	Man	52	46,1
	Woman	61	53,9
2.	**Age**		
	14 years	1	0,88
	15 years	43	38,05
	16 years	65	57,52
	17 years	3	2,65
	18 years	1	0,88
3.	**Class**		
	X.1	10	8,85
	X.2	10	8,85
	X.3	11	9,73
	X.4	10	8,85
	X.5	11	9,73
	X.6	10	8,85
	X.7	10	8,85
	X.8	10	8,85
	X.9	10	8,85
	X.10	10	8,85
	X.11	11	9,73

3.1 Results

a. Outer and Inner Assessment Model Results

This research uses four external research model indicators, namely convergent validity, discriminant validity, composite reliability and construct reliability (see table 3). The results of convergent validity statistics show that all variables starting from Educational Technology (X1), Social Interaction (X2), Learning Style (X3), Learning Outcomes (Y) and Learning Interest (Z) have factor loadings ranging from 0.727 – 0.909. This shows that these variables achieve convergent validity (>0.70). In table 3 you can also see that the AVE scores for all variables are significant because they are >0.5, which states that all variables meet the criteria for discriminant validity.

Table 3 also describes the results of the reliability test in the PLS test using the Cronbach's alpha and Composite Reliability (CR) methods. According to (Hair et al., 2017)

the two methods are used to check the reliability of the assessment model for all composite reliability coefficients and Cronbach's alpha reliability >0.70. The results of this research show that composite reliability varies between 0.872-0.907, so that it can be declared to meet the composite reliability criteria, followed by Croncbach Aplha (α) X1, X2, 0.70) which shows that it has met the composite reliability indicators (see table 3).

Apart from that, the convergent validity in table 3 shows that the loading values of X1, Table 3 shows the cross-laoding results of the five variables, namely Educational Technology, Social Interaction, Learning Style, Learning Outcomes and Learning Interest, which are greater than 0.70, which states that these variables meet the requirements of convergent validity (Hair et al., 2017).

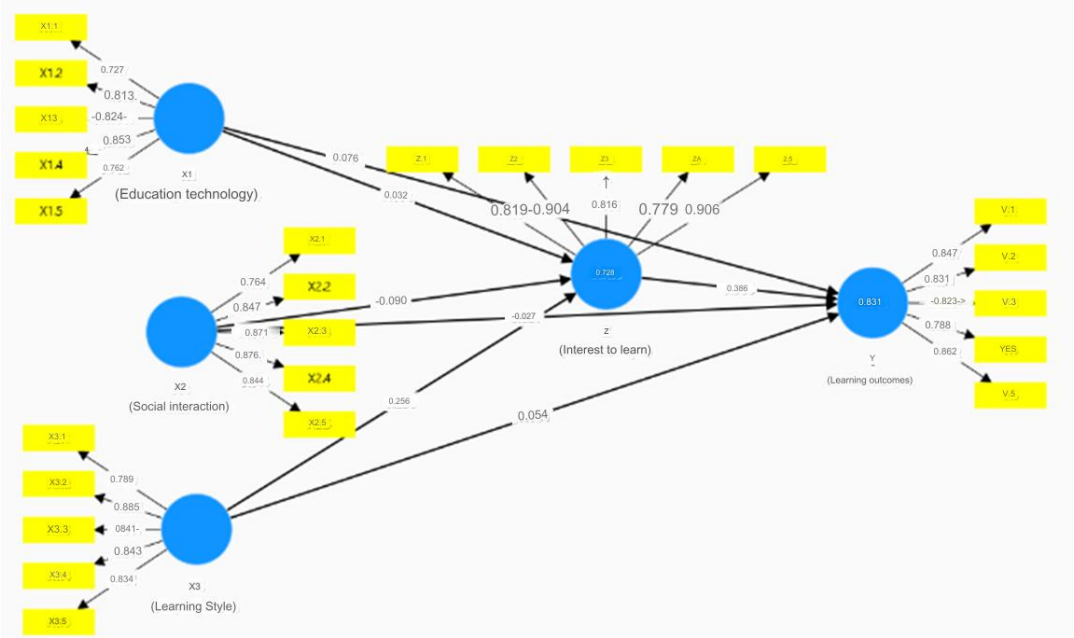

Figure 2. Measurement Model Test Results

Table 3. Calculation of measurement (outer) model

Variable	Item	Loading Factor	Rho_a (>=0,7)	CR (>=0,7)	AVE (>=0,5)
Education Technology (X1)	X1.1	0.727	0.897	0.872	0.635
	X1.2	0.813			
	X1.3	0.824			
	X1.4	0.853			
	X1.5	0.762			
Social Interaction (X2)	X2.1	0.764	0.924	0.896	0.708
	X2.2	0.847			
	X2.3	0.871			
	X2.4	0.876			
	X2.5	0.844			
Learning Style (X3)	X3.1	0.789	0.922	0.896	0.704
	X3.2	0.885			
	X3.3	0.841			
	X3.4	0.843			
	X3.5	0.834			
Learning Outcomes (Y)	Y.1	0.847	0.917	0.890	0.690
	Y.2	0.831			
	Y.3	0.823			
	Y.4	0.788			
	Y.5	0.862			

Learning Interest (Z)	Z.1	0.819	0.926	0.907	0.716
	Z.2	0.904			
	Z.3	0.816			
	Z.4	0.779			
	Z.5	0.906			

Table 5. Discriminant Validity

Variable	X1	X2	X3	Y	Z
X1 (Education Technology)	0.797				
X2 (Social Interaction)	0.687	0.842			
X3 (Learning Style)	0.731	0.816	0.839		
Y (Learning Outcomes)	0.750	0.794	0.839	0.831	
Z (Learning Interest)	0.696	0.781	0.828	0.878	0.846

b. R-Square Test

The R-Square test aims to assess predictions with standards of 0.67 (strong), 0.33 (moderate), and 0.19 (weak) (Hair et al., 2017). The R-square test calculation shows that the Learning Outcome variable has an R-Square of 0.831. This means that 83.1% of learning outcome variables are influenced by educational technology, social interaction and learning style variables. Meanwhile, 16.9% was influenced by other variables outside those studied. Apart from that, the variable Interest in learning has an R-Square value of 0.728. This means that 72.8% of the variable Interest in learning is influenced by the variables Educational Technology, Social Interaction and Learning Style. Meanwhile, 27.2% was influenced by other variables outside those studied.

c. f-Square Test

This research uses an effect size test which is determined by several criteria, namely small (0.2), medium (0.15), and large (0.35). The previous calculation shows that the value of f2 X1 on Y is 0.076, which means it has a small influence. The value of f2 X1 on Z is 0.032, which means it has a small influence. The value of f2 X2 on Y is 0.027, which means it has a small influence. The value of f2 X2 on Z is 0.090 which has a small influence. The value of X3 on Y is 0.054 which has a small influence. The value of X3 on Z is 0.256 which has a moderate influence. Finally, the Z value for Y is 0.386 which has a moderate influence.

3.2 Discussion

This research examines the influence of educational technology, social interaction and learning styles on learning outcomes by involving variables that can be predicted to mediate them, namely interest in learning. Based on statistical calculations, this research has ten proposed hypotheses.

Table 6. Hypothesis Test Results

Hypothesis	Connection	Standar devitation (STEDV)	T statistics (|O/STEDV|)	P Values	Information
H1	X1 -> Z	0.090	3.039	0.002	Sig.
H2	X2 -> Z	0.092	2.170	0.030	Sig.
H3	X3 -> Z	0.107	4.152	0.000	Sig.
H4	X1 -> Y	0.073	2.364	0.018	Sig.
H5	X2 -> Y	0.064	2.072	0.038	Sig.
H6	X3 -> Y	0.100	1.968	0.049	Sig.
H7	Z -> Y	0.099	4.086	0.000	Sig.
H8	X1 >Z->Y	0.045	2.473	0.013	Sig.
H9	X2 >Z->Y	0.055	2.646	0.008	Sig.
H10	X3 >Z->Y	0.047	4.467	0.000	Sig.

a. The Influence of Educational Technology (X1) on Learning Interest (Z)

Educational technology plays a very important role in the educational revolution that is taking place. Especially in the 21st century educational revolution and more specifically in the fourth revolution known as education 4.0. Apart from that, educational technology also allows access to wider and more varied learning resources, thereby increasing students' motivation and interest in learning (Masri et al., 2023). Educational technology is the design, implementation and evaluation of systems, techniques and tools that help in improving and enhancing the human learning process (Nindhita et al., 2022). The use of technology in learning can increase student interest by providing interactive and interesting learning experiences (Lai et al., 2024). Through multimedia elements, simulations, and virtual environments, students can engage more actively in the course material.

The results of the first hypothesis test show that there is a significant influence of educational technology on student learning outcomes at MAN 1 Makassar City. research (Hollman et al., 2019) says that the use of technology-based learning media can increase students' interest in learning. In line with research (Ray et al., 2019) also found the same results that learning models that involve technology as a learning medium can help increase student interest and learning achievement. However, this research is not in line with research (Carter et al., 2017) which found that computer use in class can disrupt students' focus and even have a negative impact on their academic achievement. Although this study did not specifically explore its impact on interest in learning, the results suggest that technology use does not always have a positive effect. Furthermore, in research (Cristia et al., 2017) this research investigates the influence of the use of technology in primary and secondary education in Latin America. The results show that the impact of technology on student learning outcomes is not always consistent and can be influenced by contextual factors such as infrastructure, teacher skills, and curriculum.

b. Influence of Social Interaction (X2) on Learning Interest (Z)

Social interaction refers to the process of exchanging information, ideas, emotions, or actions between individuals or groups in a social environment (Nora et al., 2022). Social interaction is the key to all social life, therefore without social interaction there is no there will be a life together (Howard et al., 2022). In early childhood, social interaction is very necessary because children will be taught how-to live-in society, then children will also be taught various roles which will later become self-identification, apart from that, when they have social interactions, children will get many things. information around them. Social interactions enable the exchange of ideas, shared understanding, and support between students, creating a supportive learning environment (Lasfeto, 2020). Students who feel connected to their classmates and teachers tend to be more motivated to attend class and take an active part in learning activities (Z. Liu et al., 2022).

The results of the second hypothesis test show that there is a significant influence of Social Interaction on Interest in Learning at MAN 1 Makassar City. Research (Mohamed Zabri et al., 2023) found that relationships between students and peers have a stronger correlation with academic achievement than student-parent or student-teacher relationships. The study involved more than 58,000 students and showed that the quality of personal relationships significantly influences academic performance, with relationships with peers having the greatest impact. However, this is not in line with research (Dehue et al., 2012). This research explores the negative impact of social interactions in the form of harassment or intimidation on students' psychological well-being. Findings suggest that negative social interactions can harm students' interest in learning and overall well-being. Furthermore, in research (Rissanen, 2020), this research found that the level of student participation in class discussions does not always correlate with better learning outcomes.

Factors such as the quality of interactions, classroom setting, and student motivation can influence the impact of social interactions on learning.

c. Influence of Learning Style (X3) on Learning Interest (Z)

Learning styles are individual for each person, and differentiate one person from another. Thus, in general learning styles are assumed to refer to the personalities, beliefs, choices and behaviors used by individuals to assist in their learning in conditioned situations (Arigiyati et al., 2023). So, the key to success in learning is knowing each person's unique learning style, accepting one's own strengths and weaknesses and adapting personal preferences as much as possible in each learning situation. Interest in learning is very necessary in learning so that students have an interest in the material being taught and develop a sense of enjoyment in achieving goals. Someone tends to have a high interest in learning if their learning style matches the learning method applied (Svirko & Mellanby, 2008)

The results of the third hypothesis test show that there is a significant influence of Learning Style on students' interest in learning at MAN 1 Makassar City. This research supports previous research conducted by (Sunarti, 2019) showing that there is a positive influence of learning style variables on interest in studying social studies. This is shown by the calculated t value of 2.279, significance value of 0.024, correlation value of 0.402, and relative contribution value of 20.94%. The results of this research can be concluded that learning style has a positive and significant influence on interest in studying social studies. The magnitude of the influence of learning style is 20.94%. Thus it can be said, the better the learning style, the better the interest in studying social studies. However, this is not in line with research conducted by (Kozhevnikov et al., 2014). This research highlights that cognitive style can be influenced by the environment and experience, which shows that approaches that adapt learning to learning styles may not always be effective. Furthermore, in research (Newton, 2015), this research highlights that the idea of learning styles is still widely believed and used in higher education institutions, even though the empirical evidence supporting it is still weak. This suggests that this idea may persist despite doubts about its validity.

d. The Influence of Educational Technology (X1) on Learning Outcomes (Y)

The use of educational technology has had a significant impact on student learning outcomes in several identifiable ways. Educational technology expands students' access to information by providing diverse and easily accessible resources (Safsouf et al., 2020). Current technological advances have made it possible to provide feedback to students more quickly and individually tailored to their performance, using technology that makes this possible (O. L. Liu et al., 2016). Various terms are used in the literature to refer to this technology. One term that is often used is the student response system which is also known as the audience response system (Pettit et al., 2015), classroom response system, personal response system (Song et al., 2017), and student response system. In addition, educational technology allows personalization of learning by presenting material individually tailored to students' needs and abilities.

The results of the fourth hypothesis test show that there is a significant influence of educational technology on student learning outcomes at MAN 1 Makassar City. This research is similar to previous research conducted by (Kuswandi, 2019) showing that the influence of the use of learning technology on student learning motivation, out of 30 samples, 30% of students said they were very motivated, 60% of students said they were motivated and 10% of students said they less motivated. The drivers of the quality of student learning in Islamic religious education subjects are varied learning methods, high student interest in learning. There are factors that become obstacles to the use of learning technology on student learning motivation, namely the lack of supporting facilities such as computers, LCDs, books for students and teachers. However, this research is not in line with research

conducted by (Tamim et al., 2011). This research is a meta-analysis that evaluates a number of studies on the effect of educational technology applications on student achievement. The results show that, although there is evidence that educational technology can improve students' knowledge and skills, its impact is not consistent across studies.

e. Influence of Social Interaction (X2) on Learning Outcomes (Y)

Good family social interaction will help children to develop positive attitudes which ultimately influence the child's behavior. According to (Devito 2011) good interactions are characterized by openness, sympathy, supportive attitudes, positive attitudes, and equality. Social interaction in the family occurs because there is a reciprocal relationship and mutual influence that occurs between families. In school learning, there is social interaction between teachers and students, where this interaction occurs in teaching and learning activities

The results of the fifth hypothesis test show that there is a significant influence of Social Interaction on student learning outcomes at MAN 1 Makassar City. (Dhorifah, 2017) with research entitled "The Influence of Social Interaction on the Learning Outcomes of Class V Students at Madrasah Ibtidaiyah Mambaul Ulum Sumber Gempol Pagelaran Malang. The research results show that there is an influence of social interaction on the learning outcomes of class V students at MI Mambaul Sumber Gempol Pegaleran Malang with learning outcomes that can be explained by social interaction at 8.2%. However, this research is not in line with research conducted by (Çebi & Güyer, 2020) which found that although many students actively participate in social interactions in online learning environments, this research did not find a significant relationship between social interaction patterns and students' academic achievement. after considering other factors such as learning motivation and the quality of learning materials.

f. Influence of Learning Style (X3) on Learning Outcomes (Y)

Learning style refers to an individual's preferences in receiving and processing information (Vasileva-Stojanovska et al., 2015). Some common learning styles include visual (through pictures and diagrams), auditory (through listening and hearing), and kinesthetic (through practical experience and physical movement) learning. Research has shown that students tend to have unique learning styles, and understanding their learning styles can have a significant impact on how they absorb and understand course material (Grey et al., 2015).

The results of the sixth hypothesis test show that there is a significant influence of learning style on student learning outcomes at MAN 1 Makassar City. This research is in line with research (Tanta & Youngblood Langton, 2010) which states that there is a significant influence between learning styles on learning outcomes. Teenagers who experience difficulties in learning can reflect and recall the characteristics of the most effective way of learning. However, this is not in line with research conducted by (Sudria et al., 2018), this research found that there was no consistent relationship between learning styles and learning outcomes among secondary school students in various countries. Although there are variations in learning style preferences among students from different cultures, the patterns do not show a direct relationship with academic achievement. Factors such as social support, motivation, and quality of teaching may have a greater influence. Furthermore, research (Martínez-Fernández & Vermunt, 2015) found that although many previous studies showed a relationship between learning styles and academic achievement, this cross-cultural research did not find a significant correlation between learning styles and learning outcomes among university students in various country. Analysis suggests that other factors, such as intrinsic motivation and learning environment, may have a greater impact on academic achievement than learning style.

g. Influence of Learning Interest (Z) on Learning Outcomes (Y)

Interest in learning can be influenced by various factors such as previous experience, environment, motivation, and individual needs (Hulleman, 2017). Students who have low

interest in learning tend to be less interested and less motivated in participating in learning. It is important to create a supportive learning environment to help increase students' interest in learning. This can be done by paying attention to students' individual preferences and needs, providing varied learning experiences, and some learning materials in the context of students' lives.

The results of the seventh hypothesis test show that there is a significant influence of interest in learning on student learning outcomes at MAN 1 Makassar City. This supports previous research conducted by (Kusnodo et al., 2012) which stated that students with high interest were better at passing under volleyball than students with low interest. Apart from that, the results of this research are also in accordance with the opinion of (Dalyono, 2009) "A great interest in something is a great capital which means to achieve/obtain the object or goal of interest". However, this research is not in line with research conducted by (Du & Wong, 2019). This research found that although there is a correlation between learning interest and learning outcomes in some cases, this relationship is not always consistent. Other factors such as the learning environment, teaching quality, and social support also have a significant influence on academic achievement.

h. The Influence of Educational Technology (X1) on Learning Outcomes (Y) Through Learning Interest (Z)

The relationship between educational technology and learning outcomes through interest in learning is very close as time advances (Crook, 2001). Educational technology provides significant support in understanding and utilizing individual learning styles, which in turn influences a person's learning outcomes (Djalilova, 2023). Technology also enables personalization of learning, where students can choose methods or materials that suit their interests, increasing motivation and engagement in the learning process (Suartama et al., 2020). In addition, the application of educational technology can help create a learning environment that is dynamic, interesting, and accommodates variations in learning interests. By using educational technology wisely, teachers can recognize and understand students' learning interests, creating relevant and enjoyable learning experiences (Gerjets & Hesse, 2004).

The results of hypothesis 8 testing show that interest in learning is able to mediate the influence of educational technology on student learning outcomes at MAN 1 Makassar City. This supports previous research conducted by (Benhadj et al., 2019). This research examines the relationship between students' interest in technology and their learning outcomes. The results show that students who have a high interest in technology tend to achieve better learning outcomes, especially when the technology is used actively in the learning process. However, this is not in line with research conducted by (Xie, 2021). This research shows that the use of educational technology in mathematics learning does not always result in a significant increase in student learning outcomes. Although there were some improvements, the differences were not consistently significant.

i. The Influence of Social Interaction (X2) on Learning Outcomes (Y) Through Learning Interest (Z)

Social interaction plays a crucial role in improving learning outcomes through interest in learning. In a learning context, social interaction can include collaborating with classmates, discussing with the teacher, or engaging in group activities (Back et al., 2011). When individuals have the opportunity to share their learning interests with others, this can enrich the learning experience and increase positive learning outcomes. Through social interaction, individuals can find shared interests and get support in exploring brand learning interests (Arthur, 2008).

The results of the ninth hypothesis test show that interest in learning is able to mediate the influence of social interaction on student learning outcomes at MAN 1 Makassar City. This is in line with previous research conducted by (Wentzel, 2015). This study explores

the role of social factors such as peer support, teacher-student relationships, and classroom climate in influencing students' motivation and interest in learning. This research shows that positive social interactions can increase interest in learning and academic achievement. However, this is not in line with research conducted by (Pachucki et al., 2015). This study found that although there was a positive correlation between social interaction at school and students' interest in learning, there was no significant relationship between the level of social interaction and students' long-term academic outcomes. Other factors, such as internal motivation and family support, apparently have a greater impact on student learning outcomes.

j. The Influence of Learning Style (X3) on Learning Outcomes (Y) Through Learning Interest (Z)

Learning interest reflects the extent to which students are interested and motivated to be involved in the learning process (Siddiquei & Khalid, 2018). When students feel interested in the subject matter and feel that the learning method suits their learning style, their interest in learning tends to increase.

The results of the tenth hypothesis test show that interest in learning is able to mediate the influence of learning style on student learning outcomes at MAN 1 Makassar City. This is in line with previous research conducted by (Razak et al., 2022). This research examines the relationship between learning styles, learning interests, and academic learning outcomes in medical students. The results show that interest in learning acts as a mediator in the relationship between learning styles and learning outcomes. However, this research is not in line with research conducted by (Siddiquei & Khalid, 2018). This meta-analysis found that the relationship between learning styles, learning interests, and learning outcomes tends to be more complex than previously thought. Although some studies show a positive relationship, there are also studies that find inconsistent results or even no relationship between these factors.

4. CONCLUSION

The conclusions that can be drawn based on the research results obtained can be described as follows: 1) Educational Technology has a significant influence on Interest in Learning at MAN 1 Makassar City, 2) Social Interaction has a significant influence on Interest in Learning at MAN 1 Makassar City, 3) Learning Style has a significant influence on Learning Interest in MAN 1 Makassar City, 4) Educational Technology has a significant influence on Learning Outcomes in MAN 1 Makassar City, 5) Social Interaction has a significant influence on Learning Outcomes in MAN 1 Makassar City, 6) Learning Style has an influence significant influence on Learning Outcomes in MAN 1 Makassar City, 7) Interest in Learning has a significant influence on Learning Outcomes in MAN 1 Makassar City, 8) Interest in Learning is able to mediate Educational Technology on Learning Outcomes in MAN 1 Makassar City, 9) Interest in Learning is able to mediate Interaction Social on Learning Outcomes at MAN 1 Makassar City, 10) Interest in Learning is able to mediate Learning Style on Learning Outcomes at MAN 1 Makassar City.

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