



The Effect Of Using Social Media And Collaborative Platforms In Improving Christian Religious Education Learning Motivation In Grade XI

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Article History:

Received: 8 January 2025

Revised: 8 June 2025

Published: 8 December 2025

Abstract

The purpose of this study is to see the extent of the influence of social media and collaborative platforms in Increasing Student Learning Motivation in Christian Religious Learning Class XI SMA Negeri 2 Percut Sei Tuan with a total of 30 people. This study uses a descriptive method, while the data analysis carried out by the hypothesis research is the correlation of product moment person with the data collection tool is a questionnaire. From the test results, a correlation (r) of 0.64 was obtained with a determination test of 40.96% and to find out whether the correlation coefficient is significant or not at the real level (α) = 0.05, a "t" test was held with the test criteria if ,t-calculated. which is obtained from the calculation greater (>) than the t-table. At a significant level of 1-0.05 with dk = n - 2 then the hypothesis is accepted and in other cases rejected. From the test results, t-calculate. > ,t-table. (4.22 > 1.71), then the hypothesis is accepted. Thus, a meaningful connection can be found between the influence of social media and collaborative platforms in improving Christianity in grade VIII at Marisi Private Junior High School in Medan.

Keywords: Social Media and Collaborative Platforms, Learning Motivation

INTRODUCTION

Technological developments have brought significant changes to various aspects of life, including education (Agustini et al., 2022) . Ease of access to various educational-related information is crucial, including the use of digital learning media, the implementation of effective learning methods, and the development of creative learning ideas. All of this aims to increase student motivation during the learning process (Siregar A & Sumantri, 2024) .

Based on this explanation, the use of technology through social media is a significant phenomenon in the modern era, benefiting almost everyone. We can experience its benefits in various daily activities, such as seeking information, enjoying entertainment, expanding our knowledge, and facilitating communication without being bound by distance, place, or time. Furthermore, there are many other benefits. Muniroh and colleagues (Saingo, 2022) explain that social media are internet-based applications that enable social interaction and information exchange among internet users (Sudarto, Amin, & Suriana, 2024) .

One effective way to improve student learning is through the use of social media. With its ease of communication and access to information, social media can be a very helpful tool. Among the widely used and well-known platforms are *Facebook, Instagram, YouTube, and other educational platforms*, which have significant potential to improve the quality of knowledge if utilized optimally. However, it is important to remember that this utilization must also be accompanied by efforts to minimize potential negative impacts (Novansyah, 2023) .

Advances in science and technology have had a significant impact on various aspects of human life. To foster scientific and technological development and improve the quality of human life, education plays a crucial role . Furthermore, advancements in this field are necessary to create more effective and efficient teaching methods. Innovations in science and technology have significant potential to influence the use of aids in the classroom and other educational environments. Therefore, for education to adapt to changing times, the learning process in schools must be able to adapt to ongoing developments in information technology.

The lecture approach remains the sole method used by teachers to deliver lessons. Many teachers also struggle to implement original and creative learning models, resulting in a lack of student interest in available learning resources and boredom. Furthermore, with limited educational resources available, the use of learning media in the classroom is rare, and teachers tend to focus solely on explaining the material without actively engaging students.

Developing innovative and creative learning models is crucial for improving the effectiveness and efficiency of the teaching and learning process. This aims to ensure that knowledge is effectively disseminated and that students actively participate in education. Furthermore, engaging learning can enhance its appeal. Learning media plays a *crucial role* in this regard, as it can increase learning variety and interest, particularly at the senior high school (SMA) level (Ramdhani, Khansa, & Prihantini, 2023) .

Learning media has significant power in influencing student psychology. With the right media, motivation to learn can be increased. Furthermore, media plays a crucial role in education because it can convey the information students need, thus enabling an effective learning process. Effectiveness in this learning process has great potential to achieve desired educational goals. Learning that is engaging, enjoyable, easy for students to understand, and does not cause negative effects is highly beneficial. On the other hand, the current rapid development of communication technology has also impacted the world of education, where various applications have emerged to support technology-based learning, particularly in facing the challenges of the 21st century. These various applications share the same goal: to improve the effectiveness, efficiency, and quality of learning. These types of applications include material development, creating learning videos, managing learning classes, and implementing learning evaluations (Farida Nur Kumala, 2022) .

Social media has become an integral part of Indonesian life. As the world's fourth most populous country, approximately 185.3 million of its 278.7 million population use the internet. According to a report released by Data Reportal (Peldi, Syahrudin, & Asmurti, 2024) , there were approximately 4.76 billion active social media users worldwide in 2023, representing 60% of the global population. This growth in social media users has experienced a significant surge over the past decade. In mid-2023, there was an increase of 137 million new users. However, it should be noted that user growth in 2023, according to Data Reportal (Christanto, 2023), was the lowest compared to the past twenty years. From January 2022 to January 2023, the number of social media users only increased by 3%, from 4.623 billion in 2022. The most significant increase occurred between 2016 and 2017. In 2016, the number of social media users reached 2.307 billion, while in 2017 it increased to 2.789 billion, recording an increase of 20.9% (Muammar & Suhartina, 2018) .

In Indonesia, there are approximately 167 million active social media users, representing 60.4% of the total population. Furthermore, 78.5% of internet users in the country are confirmed to have at least one social media account. The following is data on social media users from 2013 to 2023.

According to the Data Reportal report (Rainer, 2024) entitled *Indonesia Digital Data 2024*, *WhatsApp* has become the most popular social media platform among respondents in Indonesia, with a proportion reaching 90.9%. Furthermore, several other social media platforms also have usage rates above 50%, namely *Instagram*, *Facebook*, *TikTok* , *Telegram* , and *X*. The following data shows the most frequently used social media applications.

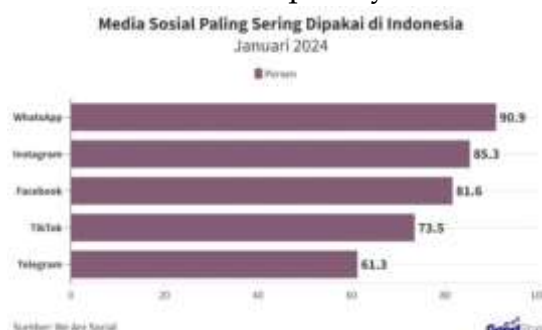


Figure 1. Data on frequently used social media applications

Instagram is a digital platform that students can utilize as an instant learning tool. It also offers numerous features that facilitate learning. *Instagram feeds* , *video reels* , and *stories* can all be used to create content about using *Instagram as a learning tool*. Teachers can utilize the *Instagram* bio option to add links to additional materials in various file formats, if desired. This application facilitates interaction between teachers and students. To support learning outside the classroom, educators can communicate with students through social media. This way, teachers can deliver material more effectively, not limited to lecture techniques as in traditional education.

TikTok is an application that functions not only as a means of entertainment but also as a learning medium. In the ever-evolving digital era, technology has become an integral part of everyday life, including in education. One social media platform that is currently very popular among teenagers is *TikTok*. This application allows its users to create and share short videos on various themes, including educational ones. *TikTok* is not only for entertainment but is also starting to be used as an innovative learning tool (Napitupulu, Ariawan, Malau, Pasaribu, & Malau, 2024) .

The *TikTok* platform has a wide range of potential to increase student learning motivation. With its interactive and engaging content, this application can serve as an effective tool in supporting the learning process, especially in learning Indonesian. *TikTok* allows lesson materials to be presented in a more engaging and easy-to-understand manner, thereby encouraging student interest and active participation. *Facebook* can be used as a platform for discussions between teachers and students, as well as among students (Sudarwanto, 2018) . In these discussions, various topics related to the subject matter taught in schools can be discussed. With the presence of *Facebook*, discussions regarding lesson materials can take place anywhere and at any time (Melna Guitari, 2020) .

According to Lintang Patria and Kristianus Yulianto (Melna Guitari, 2020), interactions or discussions on *Facebook* can be conducted in several ways. First, there is asynchronous interaction, where the teacher and learner do not interact simultaneously. This method can be done through the message and comment features. Second, there is also synchronous interaction, where the teacher and learner interact simultaneously. Based on the author's research phenomenon in the current digital era, the development of information and communication technology has brought fundamental changes in the world of education, including in the process of Christian Religious Education. One of the events of this change is the increasing spread of social media and collaborative platforms in the ongoing learning process.

The current generation, often known as digital natives, is highly familiar with social media platforms like *Instagram*, *TikTok*, and *Facebook* , as well as collaborative platforms . However, there is still a lack of motivation to learn for students, particularly in Christian religious education, which is often perceived as less engaging or relevant than other forms of education. Many students perceive Christian Religious Education (PAK) learning as purely theoretical, lacking contextual or non-verbal relevance to their daily lives.

This study examines how a Christian Religious Education teacher can foster the need for a new approach to Christian religious education, incorporating the digital world, which is often closely related to students' daily lives. Therefore, based on the author's observations at SMA Negeri 2 Percut Sei Tuan, this study aims to research and implement the use of social media and collaborative platforms as a strategy to increase student learning motivation in Christian religious education.

Christian Religious Education (PAK) teachers must have the ability to teach in a variety of ways. One way is by utilizing social media, not only for seeking information,

entertainment, or interaction, but also must be utilized optimally as a means to shape Christian character in schools. This is especially important for the students they are mentoring. Good Christian Religious Education (PAK) not only aims to expand spiritual knowledge, but also plays a vital role in increasing motivation to learn Christian Religious Education. To achieve this goal, various approaches are needed, including the use of social media technology in the educational process and the formation of Christian character, especially for students being mentored. Rantung and Boiliu explain that PAK has a crucial role in controlling the use of technology to keep it in line with Christian values, especially in the era of industry 4.0 (Kolibu & Rantung, 2019) .

God does not reject technology. For starters, God chose to communicate with us in a way that we can understand. He does not approach us with a mystical form of communication that requires deciphering to understand. God chose to introduce Himself to us through the languages we developed, especially Hebrew, Aramaic, and Greek, which are the three languages in which the Bible was written. Moreover, from the Book of Genesis to the Book of Revelation, we can see many uses of technology in the books of the Old and New Testaments. *Proverbs 1:7 says "The fear of the Lord is the beginning of knowledge, but fools despise wisdom and instruction."*

God is not rigid when it comes to using technology to achieve His purposes. In this regard, He neither fully supports nor completely rejects technology. However, this does not mean that God approves of our indiscriminate use of technology. He calls us to use technology for His glory and our good (1 Corinthians 10:31) not to destroy His creation or harm others (Jesse Wisnewski, 2024) .

Based on observations and observations conducted by researchers at SMA Negeri 2 Percut Sei Tuan . The phenomenon that underlies this research is the lack of motivation in learning, students are still lazy to do assignments, students often delay homework/assignments given by teachers, students tend to underestimate assignments by collecting assignments on the last day of collection, students are less enthusiastic in learning, they look lethargic and bored while studying, students do not participate actively in discussions or answer questions even with easy questions.

Based on the author's observations, SMA Negeri 2 Percut Sei Tuan intends to investigate in depth how social media can be utilized as a collaborative tool in the learning process of Christian religious education. This phenomenon often occurs in the current digital era, the use of social media has become an inseparable part of the lives of young people, including matters related to education. Many students at SMA Negeri 2 Percut Sei Tuan spend hours using *platforms* such as *WhatsApp, Instagram, Google Classroom* and many more. Student motivation to learn this topic tends to be low, because educational methods are still conventional and there are few skills experienced in everyday life. This is an opportunity and challenge for teachers to use social media as a means of collaboration to enhance student learning and enthusiasm.

Through this case study, the author will seek a deeper understanding of how social media usage impacts collaboration between students and Christian religious education teachers. The development of digital technology can be beneficial to changing student behavior, including in the world of education, in searching, documenting, and transferring teaching materials according to student needs at SMA Negeri 2 Percut Sei Tuan.

In the process of learning Christian religious education, technology is increasingly advanced and provides challenges for students, especially in Christian religious education in the world of education that is increasingly connected globally and rapidly developing technology, students often face social media and digital content that attracts their attention more than Christian religious learning materials that are often considered less relevant or outdated. This often occurs when there are significant challenges in creating a very enjoyable learning environment for all students without any discrimination of their religion. Thus, the author carries out a very innovative teaching strategy and the use of digital tools, teachers at SMA Negeri 2 Percut Sei Tuan make learning more interactive, increase student involvement and adapt collaborative *platform teaching methods* and increase student learning motivation in Christian religious lessons and provide learning preferences for the digital generation. (Verina, Mustikarani, Maghfiroh, Segara, & Wuliono, 2024) .

The Influence of Social Media Utilization is the media of choice for researchers in conducting and seeking data sources in conducting this research. The most widely and frequently used media are the short video *platform TikTok, Instagram, and Facebook* . The selection of these application media is based on the popularity of the Indonesian nation, especially high school students, in using the application, namely the second position as the largest TikTok user in the world, namely 109.9 million users (Pebrimireni & Fauziya, 2024) . Based on the description above, the author is interested in researching with the title " The Influence of Collaborative Platform Social Media Utilization in Increasing Motivation to Learn Christian Religious Education for Grade XI Students of SMA Negeri 2 Percut Sei Tuan

RESEARCH METHOD

The term methodology comes from the Greek words "metodos" and "logos." The word "metodos" is made up of two syllables: "metha," meaning to pass through or through, and "hodos," meaning a way or path. Method means a path taken to achieve a goal, while "logos" means science. So, methodology is a method or science used to discover the truth through investigation and certain procedures, depending on the reality being studied. (CNN Indonesia, 2022) .

According to (Sandu Sutoyo, 2015), research is an organized investigation, or a careful and critical inquiry in seeking facts to determine something. Research using scientific methods is called scientific research. To describe the research methodology used in solving research problems, it is necessary to briefly explain the operational definitions of the independent variable (X) and dependent variable (Y) indicators.

- a. The type of research method is closely related to the method used in the study. The type of research used in this study is quantitative research with descriptive methods. According to (Sugiyono, 2020), descriptive quantitative research methods are methods for examining cases involving a group of people, a system of thought, or a class of current events. The aim is to create a systematic, factual, and accurate description, depiction, or painting of the facts, nature, and relationships between the phenomena being investigated.
- b. Quantitative research methods use data, specifically numbers, with emphasis on objective measurement of results and statistical analysis. The numbers used in statistical analysis are derived from objective scales of measurement of units of analysis called variables (Balaka, 2022) .

The research location was conducted at SMA Negeri 2 Percut on Jl.Pendidikan Bandar Klippa, Kec.Percut Sei Tuan in the even semester of the 2025/2026 academic year.

The reasons for choosing the research location are: Access to the research location is easy, so that the research can be carried out smoothly. Based on the information obtained, the school has never studied the problem related to "The Influence of the Use of Social Media and Collaborative *Platforms* in Increasing Motivation to Learn Christian Religious Education in Class XI of SMA Negeri 2 Percut Sei Tuan".

Population is very important because it is the source of information. According to (Sugiyono, 2020) , population is all elements in research, including objects and subjects with certain characteristics. (Pebrimireni & Fauziya, 2024) . So the population is all members of a group of humans, animals, events, or objects that live together in one place in a planned manner to be the target of conclusions from the final results of a study.

The population of this study was all students of class XI of SMA Negeri 2 Percut. A sample is a part of the number and characteristics of a population. Meanwhile, according to S. Margono (2010) in (Purnawan & Astutik, 2018) a sample is a portion of a population, which is taken using certain methods. In determining the sample in scientific research plays an important role, because if the sampling technique is wrong then the data will be obtained incorrectly. In this study the sampling technique was not used because the number of subjects in this study was less than 100, namely 30 students, so in this study used the population technique of class XI students. According to Arikunto (2012) in (Pribadi, Setiawan, & Isyanto, 2016) if the population is less than 100 people, then the number of samples is taken as a whole, but if the population is greater than 100 people, then 10-15% or 20-25% of the population can be taken.

Study This use technique taking sample random simple (*Simple Random Sampling*), Which means that member sample chosen in a way random from population without consider class population (Sugiyono, 2020) . A sample, simply put, is a portion of a population that serves as the source of data for a study. In other words, a sample is a portion of a population that represents the entire population. Sampling techniques are essential in research because they are used to determine which members of the population will be

sampled. The sample in this study was class XI with a total of 30 students from all class XI of SMA Negeri 2 Percut Sei Tuan (Sulistyaningsih, Sunarno, & Cari, 2018) .

The technique used to process the research data was quantitative data analysis. The collected data was presented quantitatively using a Likert scale. Data analysis was conducted using descriptive and interstitial techniques to draw conclusions through statistical analysis. Next, to test whether the hypothesis was accepted or not, a normality test was performed. If the data proved normal, correlation and hypothesis testing were conducted

RESULTS AND DISCUSSION

Research result

The data analysis used in this study utilized statistics. Statistics in quantitative research are categorized into two parts: descriptive and inferential statistics. Descriptive statistics is an analysis that more clearly describes the data presented. This data presentation is usually done using tables and graphs, measures of central tendency, and measures of data variability.

Inferential statistics describes findings that can be generalized about a larger population. An important part of inferential statistics is hypothesis testing. The hypotheses used are: the null hypothesis (symbol H_0), which is a statement indicating a difference or unequal distribution.

Data analysis

Social Media Influence Data Analysis and Collaborative Platforms

In General Variable X

Based on the results of the data analysis obtained from the research field at SMA Negeri 2 Percut Sei Tuan, the score was 4.891 (Table 4.1). When these results are incorporated into the data analysis testing criteria in Chapter 3, it can be seen that social media and collaborative platforms significantly influence learning motivation in Christian religious education subjects.

Specifically (Variable X)

1. WhatsApp

Based on the results of data analysis obtained from the research field at SMA Negeri 2 Percut Sei Tuan, the score was 4.796. When these results are incorporated into the data analysis testing criteria in chapter 3, it can be seen that social media and collaborative platforms have a significant influence on learning motivation in Christian religious education subjects.

2. YouTube

Based on the results of data analysis obtained from the research field at SMA Negeri 2 Percut Sei Tuan, the score was 4.946. When these results are incorporated into the data analysis testing criteria in chapter 3, it can be seen that social media and collaborative

platforms have a significant influence on learning motivation in Christian religious education subjects.

3. TikTok

Based on the results of data analysis obtained from the research field at SMA Negeri 2 Percut Sei Tuan, the score was 3.453. When these results are incorporated into the data analysis testing criteria in chapter 3, it can be seen that social media and collaborative platforms have a significant influence on learning motivation in Christian religious education subjects.

Learning Motivation Data Analysis

In General (Variable Y)

Based on the results of data analysis obtained from the research field at SMA Negeri 2 Percut Sei Tuan, the results showed 4.867 (Table 4.5 Appendix 5). If these results are included in the data analysis testing criteria in chapter 3, it can be found that social media and collaborative platforms have a significant influence on learning motivation in Christian religious education subjects.

Specifically (Variable Y)

1. There is support or encouragement from parents and the community environment.

Based on the results of the data analysis obtained from the research field at SMA Negeri 2 Percut Sei Tuan, the result was 0.4945 (Table 4.5, Appendix 5). If these results are included in the data analysis testing criteria in Chapter 3, it can be found that social media and collaborative platforms have a significant influence on learning motivation in Christian religious education subjects.

2. Having hopes and aspirations for the future

Based on the results of the data analysis obtained from the research field at SMA Negeri 2 Percut Sei Tuan, the result was 0.489 (Table 4.7, Appendix 5). When these results are incorporated into the data analysis testing criteria in Chapter 3, it can be seen that social media and collaborative platforms have a significant influence on learning motivation in Christian religious education subjects.

3. Applying religious teachings in life through creative social media

Based on the results of the data analysis obtained from the research field at SMA Negeri 2 Percut Sei Tuan, the result was 0.4766 (Table 4.7, Appendix 5). When these results are included in the data analysis testing criteria in Chapter 3, it can be found that social media and collaborative platforms have a significant influence on learning motivation in Christian religious education subjects.

Validity Test

This validity test was conducted to determine the validity of the research instrument used. Research is considered valid if the instrument used can measure what is desired and can accurately reveal data from each studied variable. The validity test used in this study consisted of forty-six items completed by thirty. The results of the validity test can indicate

that all 30 items are considered valid because the calculated r value is greater than the table r value. The table shows that the r value is 0.643 (see Appendix 19).

Reliability Test

This reliability test was conducted to determine whether the data is reliable with the research instrument used. Research is said to be reliable if the instrument used can measure what is desired and can reveal data from each variable studied accurately. This reliability test was conducted to determine whether the data is reliable with the research instrument used in this study consisting of forty-six completed by thirty and, obtained a reliability value on the Implementation of Social Media and collaborative platforms of 0.819 (see appendix 8) and a reliability test on student learning motivation of 905. This high reliability provides assurance that the data obtained from the instrument will be consistent, accurate, and trustworthy, so that the results of the study that show the influence of the use of film learning media on improving student learning outcomes have a strong basis.

- c. Based on the results of the reliability test calculations of 30 social media and collaborative platform questionnaire questions, the calculated $r = 0.826$ was obtained while the table r at a significance level of 5% or 0.05 with $n = 30$ was 0.361. Therefore, it can be concluded that the calculated $r > \text{table } r$ or $0.819 > 0.361$. So all questionnaire questions are said to be reliable or the questionnaire used in the study can be trusted as a data collection tool.
- d. Likewise with the learning motivation questionnaire, based on the overall calculation results of the 16 questionnaire questions in (Appendix 8), the calculated r was obtained. $= 0.911$ while r_{table} at a significance level of 5% or 0.05 with $n = 30$ is 0.361. So it can be concluded that $r_{\text{count}} > r_{\text{table}}$ or $0.826 > 0.911$ so that all questionnaires are said to be reliable or the questionnaires used in the study can be trusted as a data collection tool.

Normality Test

To determine whether the data obtained could be analyzed statistically, it was analyzed using a normality test. The results were obtained from the calculations and the worksheet in Appendix 9 (Sucipta & Meitriana, 2021).

Data Normality Test X (Influence of Social Media and Collaborative Platforms)

Based on data analysis, it is obtained that $X = 28.88$; $Sdx = 28.918$; $X^2_{\text{hit}} = 1.473$ while $X^2_{\text{table}} = n-2 = 30-2 = 28$ and the level of significance (α) = 0.05, then $1-0.05 = 0.95$ while $X^2_{\text{table}} = 11.1$. For data $X^2 = X^2_{\text{count}}$ is smaller than X^2_{table} ($1.473 < 11.1$). In conclusion, based on the testing criteria, the data X is normally distributed.

Normality Test of Y Data (Student Learning Motivation)

Based on the data analysis, it is obtained that $Y = 21.99$; $Sdy = 37.92$; $Y^2_{\text{count}} = 3.336$ while $Y^2_{\text{table}} = N-2 = 30-2 = 28$ and the level of significance (α) = 0.05, then $1-0.05 = 0.95$, while $Y^2_{\text{table}} = 11.1$. For data $Y^2 = Y^2_{\text{count}}$ is smaller than Y^2_{table} ($3.336 < 11.1$) (see appendix 9). In conclusion, based on the testing criteria, the Y data is normally distributed.

Hypothesis Testing

Correlation Coefficient

Table 1. Important Quantities in Data Analysis

Massive	Amount
N	30
X	63,166
Y	66,125
X ²	3990.03
Y ²	4372.52
XY	4176.9

Correlation Coefficient Testing

$$r_{xy} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N\sum X^2 - (\sum X)^2\}\{N\sum Y^2 - (\sum Y)^2\}}}$$

$$r_{xy} = \frac{30 \cdot 4176,9 - (63,166)(66,125)}{\sqrt{30 \cdot 3990,03 - (63,166)^2 \cdot \{30 \cdot 4372,52 - (66,125)^2\}}}$$

$$r_{xy} = \frac{1253,10070 - 4176,851}{\sqrt{1197090 - 3989,94 \cdot (131,1756 - 4372,51)}}$$

$$r_{xy} = \frac{121.133.219}{\sqrt{(12,11)(12,680)}}$$

$$r_{xy} = \frac{121.133.219}{\sqrt{203448}}$$

$$r_{xy} = \frac{29,23}{454,105}$$

$$r_{xy} = 0.643$$

From the results of the calculations carried out, namely the correlation coefficient between the Influence of Social Media and Collaborative Platforms in Increasing Student Learning Motivation in the Christian Religious Education Subject of Class IX of SMA Negeri 2 Percut Sei Tuan, it was obtained: n = 30; X = 63.166; Y = 566.125; X² = 3990.03; Y² = 4372.52; XY = 4176.9.

Based on the data, the correlation coefficient can be calculated using the formula presented in Chapter III, resulting in "r" = 0.643. Using the qualification criteria for the correlation coefficient level in Appendix 19, it can be classified as strong.

Correlation Significance Test

To see whether there is a meaningful relationship between the implementation of Canva application-based learning media to increase students' interest in learning in class IX of SMA Negeri 2 Percut Sei Tuan, a statistical correlation test can be carried out, namely "t".

$$t = \frac{r\sqrt{n} - 2}{\sqrt{1 - r^2}}$$

$T_{hit} = 4.22$; (α) = 0.05 dk = n-2 (30-2) = 28, so that it is obtained $t_{tab} = 1.71$. Thus $t_{hit} > t_{tab}$, this shows that the implementation of social media and collaborative platforms on

student learning motivation in Class XI of SMA Negeri 2 Percut Sei Tuan exists and is significant.

Coefficient of Determination Test

This determination coefficient test aims to see the extent of the influence of variable X on variable Y, then the determination coefficient is used to obtain : $r^2 \cdot 100\% = (0.64) (0.64) \cdot 100\% = 40.96\%$.

Conclusion: Social media and collaborative platforms have a value of 40.96% on students' learning motivation in the subject of Christian religion in grade IX of SMA Negeri 2 Percut Sei Tuan.

Simple Linear Regression Test

The simple linear regression equation tested is $Y = a + bx$. From the calculation results obtained the value of $a = 1.93$; $b = 0.43$. Thus, the regression equation of Y on X is $Y = 1.93 + 0.43 X$). Based on the calculation, it turns out that these numbers show the influence of an independent variable on the dependent variable. The function of Y is to state that Y is obtained from regression and is distinguished from Y from experience. The coefficient "b" is called the linear regression direction coefficient and shows the average change in variable Y for a change in variable X of one (Benu & Nugroho, 2021) . From the results of the regression calculation above, it shows that if the influence of social media and collaborative platforms is good, it will increase student learning motivation. The form of the regression equation to be tested is $Y = a + bx$

$$\begin{aligned}
 a &= \frac{(\sum Y)(\sum X^2) - (\sum X)(\sum XY)}{n\sum x^2 - (\sum X)^2} \\
 a &= \frac{(66,125)(3,990) - (63,1)(4176,9)}{30 \cdot 3990 - (63,1)^2} \\
 a &= \frac{(252.036 - 26,3841)}{(119701 - 3990)} \\
 a &= \frac{223651}{115711} \\
 a &= 1,93 \\
 \\
 b &= \frac{n(\sum XY) - (\sum X)(\sum Y)}{n\sum X^2 - (\sum X)^2} \\
 b &= \frac{30(4176,9) - (63,1)(66,125)}{30 \cdot 3990 - (63,1)^2} \\
 b &= \frac{125307 - 4173}{119,70 - 39816} \\
 b &= \frac{123134}{27,8} \\
 b &= 0,43
 \end{aligned}$$

The equation $Y = a + bx$ is $Y = 1.93 + 0.43x$

Independent Test

To determine whether variable Y is independent of variable X, an independence test is performed using the F value using analysis of variance (ANOVA). Based on the calculations, $\alpha F_{hitung} = 0.61$ and $\alpha F_{tabel} = 2.35$. Thus, the criteria for the independent test are declared to be appropriate. The calculation results indicate that variable Y is independent of variable X in a linear sense (Panjaitan, 2020) .

Researcher Findings

From the results of data calculations and hypotheses, research findings can be found that: After conducting a data normality test on data X and data Y as one of the requirements for the following data analysis, it turns out that data X and data Y are each normally distributed. Data normality testing has been carried out using the *Chi Square formula* (X^2 table with a significance level = 0.05, namely (Bahtiar, Kafrawi, & Yeni, 2020) :

- a. For data X (Social Media and collaborative platforms) $X^2_{count} = 1.473$ while $X^2_{table} = 28$ (Appendix 4.3). This means that data X (Social Media and collaborative platforms) is in a normal distribution or data X comes from a normally distributed sample.
- b. For data Y (student learning motivation) $Y^2_{hitung} = 3.336$ while $Y^2_{tabel} = 28$ means that data Y (student learning motivation) is in a normal distribution or data Y comes from a normally distributed sample.

Based on the data obtained from the field contained in the attachment, it shows that: In variable X, the influence of social media and collaborative platforms developed 3 (three indicators), namely:

WhatsApp

WhatsApp in carrying out the tasks discussed shows the results of the quality of the material and assessment of 4.79 (appendix 5). This means that social media and active collaborative platforms used by teachers have a significant relationship with increasing student learning motivation at SMA Negeri 2 Percut Sei Tuan.

YouTube

YouTube in the teaching and learning process discussed shows the results of the quality of the material and assessment of 4.94 (appendix 5). This means that the active learning media used by teachers has a significant relationship with increasing learning motivation at SMA Negeri 2 Percut Sei Tuan.

TikTok

TikTok in carrying out the tasks discussed shows the results of the quality of the material and assessment of 4.93 (appendix 5) this means that the active learning media used by teachers has a significant relationship to increasing learning motivation at SMA Negeri 2 Percut Sei Tuan (Idrus Alawi, 2019) .

Discussion

Based on the research results that have been presented, it can be seen that there is an influence of social media and collaborative platforms on student learning motivation in the subject of Christian Religious Education in class XI of SMA Negeri 2 Percut Sei Tuan. From the results of the correlation test obtained $(r) 0.64$ with a determination test of 40.96% and to determine whether or not the correlation coefficient at the level $(\alpha) = 0.05$, a "t" test was conducted. From the test results obtained $t \text{ count} > t \text{ table}$ ($4.22 > 1.71$), then the hypothesis is accepted.

Based on the results of data analysis, it is obtained $X = 28.88$; $Sdx = 28,918$; $X_{hit} = 1.473$ while $X^2 \text{ table} = n-2 = 30-2 = 28$ and the level of significance $(\alpha) = 0.05$, while $X^2 \text{ table} = 11.1$ For data = count is smaller than the table ($1.473 < 11.1$) (see appendix 9). In conclusion, based on the testing criteria, the data X is normally distributed. Based on the results of data analysis, it is obtained $Y = 21.99$; $Sdy = 37.92$; count $y^2 = 3.336$ while the table = $N-2 = 30-2 = 28$ and the level of significance $(\alpha) = 0.05$, while $Y^2 \text{ table} = 11.1$ For data = count is smaller than the table ($3.336 < 11.1$) (see appendix 10 table 20). In conclusion, based on the testing criteria, the Y data is normally distributed (Aulia, Didik, & Mahsul, 2020).

After implementing PAK (Christian Religious Education) learning on the Use of social media and collaborative platforms and student learning motivation based on data analysis that social media and collaborative platforms for WhatsApp learning media showed results of 4.796 . If these results are included in the assessment criteria, it can be said that there is an influence between social media and collaborative platforms and student learning motivation (Sari, 2019). About adapting materials and methods to suit needs Based on data analysis, the results of YouTube in adapting materials and methods to needs were 4.946 . If these results are included in the assessment criteria, it can be concluded that social media and collaborative platforms influence student learning motivation in grade XI of SMA Negeri 2 Percut Sei Tuan.

Based on data analysis, the use of TikTok social media showed a score of 3.453 . If these results are included in the assessment criteria, it can be concluded that social media and collaborative platforms influence student learning motivation in grade XI of SMA Negeri 2 Percut Sei Tuan.

CONCLUSION

Based on the theoretical description, data analysis, and hypothesis testing, conclusions and suggestions are presented that are considered important and in line with the research objectives.

1. In General

The results of this study emphasize that the implementation of social media and collaborative platforms has an influence on student learning motivation in Christian religious education subjects in Grade XI of SMA Negeri 2 Percut Sei Tuan. This is evident from the calculation of the correlation coefficient, correlation significance test, determination test, simple linear regression test, independent test, and regression test.

2. Specifically

The results of the research above show that the implementation of social media and collaborative platforms in increasing learning motivation has a positive impact on increasing students' interest in learning Christian religious education subjects for class XI at SMA Negeri 2 Percut Sei Tuan with various aspects, namely:

a. WhatsApp

The influence of social media and collaborative platforms on WhatsApp for students in implementing Christian religious education learning has a positive and significant influence in increasing students' interest in learning Christian religious education subjects for class XI at SMA Negeri 2 Percut Sei Tuan.

b. YouTube

The influence of social media and student collaborative platforms on WhatsApp in the implementation of Christian religious education learning has a positive and significant influence in increasing students' interest in learning Christian religious education subjects for class XI at SMA Negeri 2 Percut Sei Tuan.

c. TikTok

The influence of social media and collaborative platforms on WhatsApp for students in implementing Christian religious education learning has a positive and significant influence in increasing students' interest in learning Christian religious education subjects for class XI at SMA Negeri 2 Percut Sei Tuan.

Suggestion

Based on the research presented, it shows positive results, but further follow-up is needed in the future. Some suggestions that will be provided include:

1. A teacher should be able to understand his students in carrying out assignments and be able to direct the use of social media and good collaborative platforms to increase students' learning motivation, especially in Christian religious education.
2. As a teacher, you should be able to use interesting learning media so that students can be more active in participating in learning, thereby increasing their interest in learning.
3. For schools, they should implement interesting social media and collaborative platforms and use positive applications in the learning process at school, because implementing interesting social media and collaborative platforms can increase student motivation in the learning process.
4. To the FKIP of HKBP Nommensen University Medan, especially the Christian Religious Education study program, to further improve the quality of prospective educators when they are in the field, so that prospective educators are able to demonstrate the quality of their teaching through various strategies including their teaching competencies.
5. Realizing the imperfections of this research , it is suggested to prospective Christian religious education teachers who wish to follow up on this research to improve further

research by collecting data , both independent variables and dependent variables in more detail so that valid data will be obtained

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