

Analyzing the Impact of Artificial Intelligence on Student Learning: A Case Study of SMK Tri Arga 2

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ABSTRACT

The use of artificial intelligence (AI) technology in every aspect of life is a solution that provides an important contribution to the continuity of the wheel of life, not to mention in the world of education. In this digital era, AI has become an important partner and tool for students in completing assignments and assisting in carrying out their learning activities, especially in completing assignments given by teachers. The purpose of this study is to analyze the effect of artificial intelligence on learning, especially for students of SMK Tri Arga 2. The formulation of the research problem involves a description of the use of AI in the process of completing assignments, the benefits and challenges experienced by students, and the most dominant AI applications used in completing these assignments. The research method used is a quantitative descriptive method using a questionnaire, Likert Scale, which is created on Google Form and then sent to the Whatsapp Group and student personal chat. Using a random method. 105 students of SMK Tri Arga 2 participated in this study. the results of this study showed that 51.4% stated that they often use AI. Then 52.4% or 55 students answered that they often use AI in completing school assignments. These results certainly provide a new perspective on the role of AI in helping students complete the school assignments they have been given. It is also hoped that the results of this research can help Senior High Schools (SMA) and Vocational High Schools (SMK) in improving the quality of education and learning by integrating AI more effectively in their students' academic processes, improving supervision and regulations regarding the use of AI in completing assignments and making AI a companion tool while still paying attention to the ethics of plagiarism and the growth of students' skill development.



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I. INTRODUCTION

Intelligence is the capability to gather and apply competencies and understanding in solving existing troubles [1]. synthetic Intelligence (AI) is the technological know-how and engineering of creating wise machines, together with clever computer programs [2]. the usage of AI in schooling has unfold to a number of evolved international locations in recent years and keeps to enjoy rapid improvement, consisting of Indonesia [3]. the usage of artificial intelligence within the context of education can already be recognized in several international locations [4].

training has lengthy been diagnosed as a fundamental pillar of country wide development due to its capacity to train and put together satisfactory human beings to stand global challenges [5]. AI performs a important role in personalizing learning by gathering and analyzing information on college students' person needs, choices, and improvement. based totally on this information, AI then affords a learning revel in tailored to every pupil's needs [6].

AI can serve as a friend and associate for students as they paintings on their scientific Papers. AI can help students enhance their writing by way of imparting remarks and guidelines. AI can help in building more potent arguments and offering better content options [7]. similarly, AI can assist

college students remedy issues they may encounter whilst writing. for example, AI can assist college students who have difficulty formulating arguments or writing systems. In a few cases, AI also can understand students' specific needs and options, in order that it is able to offer hints which might be extra in line with college students' wishes via learning their writing styles and alternatives. thus, AI is not best a device, however additionally a pal who enables college students [8].

When it comes to the above, an initial survey become performed on 30 junior high faculty English instructors in Aru Islands Regency, Maluku Province, to decide the inhibiting elements in writing scientific articles. The survey consequences confirmed that lack of technical information, grammatical uncertainty, paintings demands and problem in finding subjects had been limitations in writing. these results offer perception into the inhibiting factors that want to be considered in efforts to improve instructors' ability to jot down medical articles in junior excessive faculties. This description also becomes an entry factor for AI among students in doing their assignments [9].

Further to the above-mentioned benefits, the use of AI also lets in for full-size technological ability development. If students use artificial intelligence whilst writing their scientific papers, they'll have the opportunity to turn out to be extra professional in facts processing and information evaluation [10]. this can assist them compete in an increasingly more digitalized activity marketplace. With AI, no longer simplest can they get the solutions they need fast and effortlessly, but students also can discover more understanding and facts that supports their field of examine at once with out the want for high priced costs, [11]. another convenience of AI that is useful as a supporting tool, according to K. Seo because the software of era which include artificial intelligence gives various equipment to aid teaching and getting to know in better education which might be capable of provide new gaining knowledge of studies that can't be acquired from traditional studying [12].

AI can help students remedy troubles they'll encounter while writing. for example, AI can assist college students who've trouble formulating arguments or writing structures. In a few cases, AI can also recognize students' unique desires and alternatives, in order that it may offer pointers which can be greater in line with students' wishes with the aid of studying their writing patterns and preferences [13]. for that reason, AI isn't best a device, but also a chum who facilitates students. the use of artificial Intelligence in finishing pupil assignments, specifically at SMK TRI ARG 2, has changed the manner college students do or whole academic assignments. AI improves performance, writing best, and get admission to to investigate sources. AI performs an vital position in various components of writing, consisting of magazine searches, references and citations, and plagiarism tracking [14].

In addition to being a tool, AI also acts as a companion for college students. AI affords hints, corrections, and steering that can assist students attain their maximum potential in

fixing problems in studying at faculty [15]. therefore, this have a look at is predicted with a view to boom readers' know-how concerning using AI in solving problems or assignments given to college students at college, the challenges and the most dominant AI packages utilized by SMK Tri Artga 2 college students in completing their assignments. This observe goals the class of 2024 on the grounds that they are college students who had been born within the technological technology, so using AI isn't hard for them. This is in line with D. Senkey who stated that the presence of artificial intelligence era has a power on students. most of the people of college students are generation Z where they are more literate and acquainted with generation [16].

II. METHOD

This have a look at became carried out at SMK TRI ARG 2 Jakarta with the goal of analyzing using AI in the crowning glory of assignments by means of SMK Tri Arga 2 college students, the benefits and demanding situations of using AI and the programs they use most usually while doing assignments. This examine uses quantitative, in which the quantitative descriptive statistics method is accrued and analyzed, even though according sugiyono (2017) Descriptive method is a technique used to explain or analyze research effects however can't be used to draw large conclusions [17]. The data collected came from 105 respondents who had filled out statements that were distributed randomly or Random Sampling, with classification, 58 students majoring in computer and network engineering (TKJ) and 47 from accounting and finance, class of 2024/2025 became the object of choice for the reason that students this year's class is a new class where they need time to adjust learning in vocational high schools (SMK) and considering that this year, the use of AI in the academic world is increasingly massive and this class is generation Z who in their daily lives, technology has become commonplace. The survey instrument sent via WA groups and students' personal chats using Google Form, with 10 statements using a Likert scale, where points 1 (never), 2 (often), and 3 (rarely), and 1 free question related to the most dominant application they use in completing student assignments. The results of the instrument were analyzed using quantitative description methods. The Likert scale is a scale used to measure the notion, mind-set or opinion of a person or institution concerning an event or social phenomenon [18].

III. RESULTS AND DISCUSSION

A. *The Use Of AI In Completing School Assignments For Students At SMK Tri Arga 2*

From the results of the survey conducted at SMK TRI ARG 2, 105 students participated in this study, 58 students from the computer engineering and network department while

47 students from the accounting and finance department filled out the survey, which obtained the following results:

Apakah anda Pernah Mengerjakan Tugas dengan bantuan Artificial Intelligence (AI)

105 jawaban

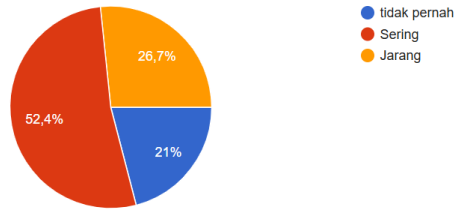


Figure 1 survey ever worked on tasks with AI

From the results of the questionnaire that has been distributed to students, it was found that every student at SMK Tri Arga 2, 52.4% of students admitted that they often use AI to help them complete their schoolwork. As many as 26.7% of students admitted that they rarely use AI assistance in completing their schoolwork, while 21% of students admitted that they never use AI in completing their schoolwork.

For the use of AI itself, it's miles used to look for references or literature as a reference in answering questions or finishing school assignments that have been given by teachers [19]. As many as 51.4% admitted to often using AI as a solution to help students meet their needs. The rise of AI within the instructional global is a venture for teachers or instructors these days, but to respond to this, concrete steps that should be taken are now not to avoid or limit the use of this AI era, however to accompany and assist direct its use [20]. In this study, it was found that, 41% of respondents from 105 students, chose point number 2, or often use AI. Followed by 34.3% who chose rarely. Only 24.8% chose never. With these results, it can be concluded that, currently, the convenience provided by AI is one of which is providing space for students to search for journals, books and other literature online. In line with the findings of Salsabilla, KA Z (2023) who stated that during latest years, better education has applied the capabilities of this synthetic Intelligence generation. as an example, students who use this synthetic intelligence technology to guide their lecture sports, inclusive of in doing assignments, looking for facts, searching for materials, and so on. From the effects of his studies, it became additionally found that the usage of synthetic intelligence technology has an effect on students. The effects are that students find it less complicated to get admission to substances for lectures, make it easier for college kids to learn foreign languages, college students are freer to ask questions with out being confined by using time, and students' needs for the function of a instructor can be met [21].

The results of the analysis above are consistent with preceding studies, who discovered that the usage of synthetic intelligence (AI) is a promising solution, permitting instructors to overcome technical boundaries and improve the pleasant of their writing. extensive training changed into

executed, specializing in writing strategies, grammar, and the usage of AI. previous studies introduced that inside the context of writing scientific papers, AI brings good sized advantages to teachers. AI can help teachers within the studies procedure, information analysis, and writing medical articles in a greater efficient and accurate way. AI can discover research trends, examine data in depth, and assist in drawing conclusions based totally on available facts. similarly, AI also can help in checking grammar, spelling, and writing codecs that comply with clinical standards. With the assist of AI, teachers can enhance the first-class and effectiveness in their medical papers, and decrease viable errors. This can help teachers produce high-quality research that contributes to the development of science and education [22].

B. Benefits And Challenges Of Using AI

Artificial intelligence has the ability to be pervasive and create foremost adjustments within the education sector. this is obtrusive from before the life of computers and different technology, teachers and college students have been involved in direct teaching and learning sports. laptop and telecommunication technology has endured to expand over time, leading to the development of artificial intelligence. With the introduction and use of latest technology in education, artificial intelligence has additionally observed wide application in schooling [23].

in addition to the above, it's far undeniable that the usage of AI among college students, inside the midst of their busy lives, other jobs except reading, AI makes them faster in completing the mission [24]. As many as 50.5% of students answered that they often use AI to help them do something, be it schoolwork or others, as many as 29.5% answered rarely followed by 20% answered never, from these results it can be concluded that AI is very influential on the daily lives of students in helping them do something. This can be seen in the picture:

Apakah aplikasi ini semakin memudahkan Anda dalam membantu anda mengerjakan sesuatu?

105 jawaban

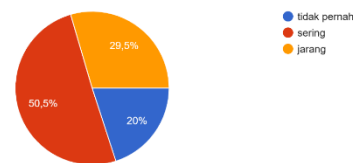


Figure 2 Does AI make it easier to do things?

From here it is able to be visible that this is actually one of the positive sides of AI. that is in keeping with the findings of previous research who said that there are threats and possibilities due to the life of GP chat. This AI has an effect on the competence of accounting students related to the usage of GPT chat technology responsibly and ethically within the academic international [25].

Related to how the role of students in solving problems or completing school assignments given to them. The results of this study provide an overview that as many as 52.4% of students answered that they often make improvements to the AI results they have obtained, while as many as 28.6% rarely make improvements, 19% answered never make improvements. These results indicate that these students are still aware that the use of AI is not always correct and still requires checking and improvement by them.



Figure 3 Have you ever done any repairs from AI?

In reference to the blessings and blessings of using AI, there also are concerns from educators up to now, and they may be very affordable, particularly the trouble of plagiarism in academics in finishing faculty assignments and growing unique skills to apply AI. The presence of AI is a actual assignment in the instructional international, writing ethics, and different issues [26]. In this survey, it was found that 42.9% of students were aware of the plagiarism of using AI. Followed by 33.3% who were rarely aware of this plagiarism and 23.8% of them were not aware of the plagiarism of using AI. Likewise, 44.8% of these students answered that they were often aware that the use of AI hindered the development of their skills, 20% answered that they were rarely aware of this while 35.2% answered that they never realized that the use of AI could hinder their skills, this is certainly a special concern for educators for their students:



Figure 4 awareness of plagiarism

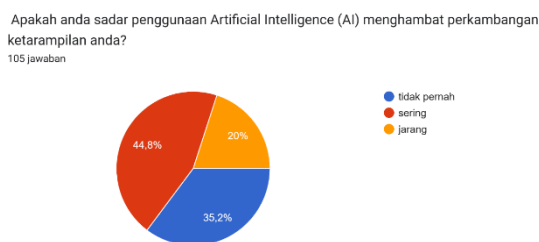


Figure 5 awareness inhibits skill development

The concerns that stand up are also challenges within the use of AI in academia. in line with previous studies, the reality that the use of synthetic intelligence additionally brings other impacts which include causing issues to college students approximately competition in finding jobs, concerns approximately variations in solutions from artificial intelligence assets with academics' assets, and pupil issues approximately the safety of their personal records. consequently, the have an effect on of using artificial intelligence generation itself cannot be related and concluded as having an awesome or terrible impact, due to the fact all of this is adjusted again from the cause of the use of artificial intelligence era and its customers [27].

What is interesting in the findings of this survey analysis, it turns out that many students realize that the use of AI makes them lazy to think critically, this is proven by 40% of students often realizing that the use of AI makes them lazy to think critically, 34.3% of students rarely realize this followed by 25.7% never realizing that the use of AI makes students lazy to think critically. For an illustration, it can be seen in the picture below:



Figure 6 AI causes lazy thinking

Of route, as a lesson that may be discovered from this survey is powerful mentoring from educators. imparting a minimum limit on how many percent of schoolwork completion can use AI in its paintings.

C. Dominant AI applications used

According to previous research the most popular AI applications in language teaching can be seen in the table below [28]:



Figure 7: AI is most in demand (source Subiyantoro, 2023)

Indirectly, this AI application is also a trend among students, lecturers, and not to mention high school students, although the functions are different, but 85% basically the use of this application has also been used in completing the assignments of SMK Tri Arga 2 students. In Subiyantoro's findings above, Grammarly and ChatGPT are at the top of the most popular. Based on this, the results of this study provide an overview if the AI application used by SMK Tri Arga 2 Jakarta students in completing their school assignments is ChatGPT in first place. Other AI applications used by SMK Tri Arga 2 students. The following is depicted in the picture:

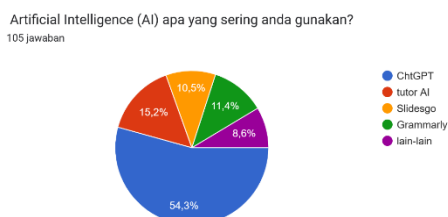


Figure 8 AI that you often use

As many as 54.3% of students chose GPT chat as the AI that is often used to help them complete school assignments, followed by 15.2% AI tutors, then in third place is Grammarly at 11.4%. From the results of this study, it can be concluded that GPT chat is a favorite among students in helping them do school assignments or solve other problems.

This dominance is consistent with preceding research understanding and comprehensiveness regarding the effect of GPT chat which provides suggestions for universities in integrating guidelines to become a moral consideration associated with educational honesty and immoderate dependence on GPT chat that could cause decreased competence of accounting students. therefore, the use of GPT chat should be carried out responsibly and based totally on robust moral values. in order that threats and possibilities can optimize the advantages and dangers associated with using GPT chat [29]. meanwhile, preceding studies located that ChatGPT changed into the second one AI device utilized by teachers in teaching English.

IV. CONCLUSION

Student responses to AI show positive acceptance of the role of AI in the learning and teaching process. Most students admitted that AI is often used as a tool to help with schoolwork, increase efficiency and accuracy in processing data, and greatly help speed up writing. Most students are rarely related to the ethics of using AI, however, there are concerns regarding the ability to use AI that requires large human resources and costs. Likewise with the limitations of using AI, most students use AI only for certain parts of the tasks that have been given.

Researchers suggest effective mentoring for students who use AI effectively in completing schoolwork, as well as collaboration between teachers and students, so that it can be more beneficial. This includes providing guidance, and teachers can also play a key role in providing guidance and mentoring. In addition, there is a need for clear guidelines or policies from schools and the Ministry of Education regarding the use of AI in learning, including its use. solutions, wherein these prevention efforts and using AI in line with desires are identified. From this have a look at, it's miles concluded that instructional integration calls for a sensible approach which will offer maximum advantages with out sacrificing and inhibiting the development of students' talents and vital questioning.

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