

The Impact of Use of Chatgpt on Changes in Students' Learning Behavior

Syaipul Assegaf¹ (Universitas Negeri Surabaya, Indonesia)

Mara Qonitatillah² (Universitas Negeri Surabaya, Indonesia)

Nurlita Nazma Prameswari³ (Universitas Negeri Surabaya, Indonesia)

Bayu Kurniawan⁴ (Universitas Negeri Malang, Indonesia)

Nurul Ratnawati⁵ (Universitas Negeri Malang, Indonesia)

Received: 08-12-2023

Accepted: 05-05-2023

Published: 01-06-2024

DOI: <https://doi.org/10.26740/ijgsme.v2n1.p49-58>

e-ISSN : 2987-9140

Volume : 2 No.1, (2024)

Page : 49-58

Abstract

This research is a qualitative study that examines the impact of using ChatGPT on changes in student learning behavior. Behavior change is a process of movement carried out by individuals to adapt to the environment. This research used qualitative research methods and obtained 9 respondents. Data collection methods used observation and interview techniques. The results of this research show that ChatGPT has positive and negative impacts, using ChatGPT makes students quickly complete assignments, but this causes students to become increasingly dependent and lazy about reading articles and books, students will experience decreased literacy and have negative effects.

Keywords: AI, ChatGPT, Behavior, Learning

1. INTRODUCTION

Students are individuals who are studying or currently studying at the tertiary level, whether state, private or other institutions of the same level. According to Siswoyo (2007); Hasyim et al. (2023), students are required to be agents of change and students must practice the tri dharma of higher education (Education and Teaching, Research and Development, and Community Service). Invitation No. 20 of 2003 concerning the Education System, which states that education is a conscious and planned effort to create an atmosphere of learning and learning so that students are active in developing their potential and skills.

When studying at university, students often get assignments from lecturers so that students can better understand the subjects given by the lecturer. When carrying out assignments from the lecturer, each student has their own way of doing, completing assignments and learning behavior. Learning behavior is a person's desire, ability and skills in learning. As technology develops, it is also in line with the development of scientific progress. This creates encouragement for technology creators to continue to innovate so as to produce something new and can help human activities, one of which is students. With the existence of AI or artificial intelligence which is related to the development of computers that are capable of carrying out thinking, reasoning and self-correction activities like humans. An example is ChatGpt which is a model that resembles the Gpt instructions. Who is trained and can respond quickly.

ChatGPT is a sibling model to InstructGPT, which is trained to follow an instruction in a prompt and provide a detailed response (ChatGPT is a model similar to InstructGPT, which

Corresponding Author: E-mail: syaipulassegaf.22016@unesa.ac.id

©2023 IJGSME

is trained to follow instructions quickly and provide a detailed response) ChatGPT (Generative Pretrained Transformer) was developed with a technique called Reinforcement Learning from Human Feedback to train the language model, enabling it to be very conversational (Kok et al., 2009).

Based on a survey in April 2023 from Katadata, ChatGPT users reached 52% of 1014 respondents and the majority of respondents from Java were 76%. The data presented shows that in Indonesia there are many active ChatGPT users. mUsing ChatGPT can make it easier to solve problems, answer questions, write essays and much more. because this convenience can create dependency and reduce the quality of student learning, those who used to look for references and data from journals or websites have changed and only rely on AI (ChatGPT) (Maulana et al., 2023). Open Ai as the developer of AI (ChatGPT) stated that the ChatGPT they developed does not necessarily give the correct answer, because they use the Reinforcement Learning from Human Feedback (RFHL) model, the command (prompt) can also be biased so it could give the wrong answer (Sholihatin, et al., 2023). Students can take it for granted and just copy paste and not review it. This can also affect what students learn (Suharmawan, 2023).

Understanding Learning

Understanding concepts, meanings and relationships, through an intuitive process to finally arrive at a conclusion (discovery learning). According to Allen (2000), learning is a process with related systems. Learning changes from ignorance to knowing, learning is when changes always occur within a person.

There are several characteristics of changes in behavior in terms of learning, namely:

- a. The existence of changes that occur consciously means that a person learns to realize and feel a change occurring within himself.
- b. Changes in learning are continuous and functional which occur in a person where these changes occur continuously.
- c. Positive and active learning changes. This change occurred because of the increase in goals that were better than before.
- d. Changes in learning are not temporary, this occurs because the learning process tends to be permanent or permanent. For example, the development of a person's skills.
- e. Changes in learning are purposeful or directed. This change occurs because there is a goal to be achieved and usually occurs consciously.
- f. Change covers all aspects of behavior where this change in behavior occurs after a person has gone through the entire learning process in terms of attitudes, skills and knowledge.

Changes in Behavior

There are three forms of behavior change according to Irwan (Kim, 2020).

1. (compliance)

Behavioral changes that are caused by force, these changes are not good and tend not to last long. Compulsion also often causes thought rebellion in individuals

2. Imitation (identification)

Changes in behavior through imitation are a common phenomenon. Often, individuals tend to imitate the actions of others or even imitate what they see without truly understanding or processing the information received. This phenomenon reflects the common way in which human behavior changes through imitation of the actions of others, often without deep understanding.

3. Understanding (internalization)

Humans have the ability to reflect on life, understand the mysteries of existence, ponder the meaning of life wisely, and enrich their experiences with new learning. Changes in human behavior are often influenced by this deep understanding, which can come from personal experience or be gained from the experiences of others. When individuals feel that a change in behavior is important and in line with their values, they will willingly adopt and embrace the change within themselves.

Behavior change has several stages according to Roger and Shoemaker (Pakpahan, et.al., 2021)

1. Awareness

The individual stage of knowing and realizing about the existence of new things

2. Interest

The stage a person pays attention to a new thing

3. Trial

The stage when individuals begin to try to use the new idea

4. Adaptation

The stage where if the individual is interested then he will accept the new idea. This stage does not mean that something new is accepted or rejected, but this situation will change due to environmental influences.

2. METHOD

In this research, we used a qualitative approach, where this approach uses a natural paradigm to examine social problems in an area in terms of the background and holistic perspective of the object being studied (Abdussamad, 2021). In this research we emphasize data collection using observation techniques and also interviews with student subjects who received 11 respondents. Where, these respondents were asked to fill out a questionnaire that we had prepared and was relevant to our research.

Observation

Observation is a way or method of collecting information or data that is carried out by systematically observing and recording the phenomenon that is being targeted for observation (Mania, 2017). Observation is used to reveal the meaning of an event in a particular setting. Observation takes place solely observing and not participating in the subject's activities.

Observers can play a role in the subject's activities with little difference between the researcher and the subject. During the observation, the researcher and the subject cannot be separated, because at the start of the observation the researcher remains separated from the subject until

a good relationship is created. And then the success of the research depends on the subject's ability to adapt.

Interview

Interviews with informants as resource persons were carried out with the aim of obtaining and digging deeper into information related to the research focus. In other words, interviews are carried out in order to construct information about individuals, events, activities, motivations, etc. Apart from observation techniques for participating in qualitative research, interview techniques can also be used to collect data. Interviews are one of the main techniques used to collect data (Fadhallah, 2020).

An interview is a conversation between two or more people where several questions are asked by someone who is the interviewer. Apart from that, this interview technique can also be used as a supporting strategy for other techniques for collecting, analyzing data, etc. The first thing to do during an interview is to start with an introductory conversation and attempt to create a good relationship in the hope that the resource person can provide answers that are in accordance with the research.

The interviews we used in this research used a questionnaire aimed at students who had experience in using ChatGPT. The following is a series of questions that make up the questionnaire.

Table 1. Sample, Qualification, and Question

No	Samples and Qualification	Question
1.	Reasons to use ChatGPT The qualifications are: ChatGPT user	1. What do you know about ChatGPT? 2. How did you learn about ChatGPT? 3. What is your reason for using ChatGPT? 4. Since when have you been using ChatGPT? 5. In what situations do you use ChatGPT? 6. Do you find it difficult to do assignments without ChatGPT? 7. Do you use ChatGPT without looking for other references? 8. Do you feel there has been a change in your learning behavior because of ChatGPT? 9. What makes you like ChatGPT? 10. How often do you use ChatGPT?
2.	Student learning behavior using ChatGPT and student learning behavior when completing assignments and exams	1. When you get assignments from school to do at home, do you use ChatGPT? 2. Do you often procrastinate with ChatGPT? 3. Does the ChatGPT application make you lazy about studying at home? 4. Do you still use the ChatGPT application when you want to take an exam? 5. Does the ChatGPT application help you to prepare for the exam? 6. Does using the ChatGPT application make you feel lazy in preparing to study for the exam?
3.	Positive impacts and negative impacts of using ChatGPT	1. What positive impacts have occurred to you from using the ChatGPT application? 2. What negative impacts have occurred to you from using the ChatGPT application?

3. RESULT AND DISCUSSION

Observation Results

The researcher made observations of the informants to be researched, namely making observations when students were carrying out assignments. Researchers made observations when students were using ChatGPT.

When using ChatGPT, students write down the prompt (command) they are looking for. I uses ChatGPT to look for research methods and wants to apply them to the assignment he is currently undertaking. He compares the methods written by AI with methods in journals and books. This shows that ChatGPT can provide references about research methods and become a reference for students.

Next, the researcher made observations at RS, when, while working on an assignment, RS gave a prompt about creating a background for a paper that he wanted to work on, RS immediately copied and pasted without checking whether the background was correct and did not check or look for other references. This shows that ChatGPT can speed up the work done by lecturers but will make students more lazy about reading journals, books and articles.

Interview result

1. Reasons for using ChatGPT

Nowadays, the use of ChatGPT is something that is commonplace and we often find it among students. ChatGPT is a web ChatBot that can be used to solve problems, answer questions, write essays and much more in a relatively short time. Apart from being one of the best-selling AI ChatBot, ChatGPT can also be used for programming languages such as HTML and CSS.

The use of AI ChatGPT has various impacts on students' learning behavior, both positive and negative. When students use AI ChatGPT excessively, it can certainly have a negative impact on student behavior. Responsibility for using AI ChatGPT is certainly very necessary. Students must be able to manage their use of AI ChatGPT wisely so that the results for students will be good in the future.

The following are the results of interviews explaining the reasons why students use ChatGPT. Based on what N/19, JA/19, MZ/19, RS/22, FP/22, RA/19, S/19 I/20 said, the reason they downloaded and used ChatGPT was to make things easier and help complete their tasks.

"Apart from being free, it also helps me when I'm in a pinch" N/19.

"Makes it easier for me to answer difficult questions, providing recommendations on what users are asking." JA/19.

"Because it makes work easier and provides answers from many perspectives" MZ/19.

"Easy to use and understand" RS/22.

"So that tasks can be completed quickly" FP/22.

"Shortening time in searching for answers" RA/19.

"Because it is easier and free" S/19.

"Because it's easy" I/20.

Based on what ZA/19said, their use of ChatGPT only wanted to try it out and wanted to find out information.

"Because it answered everything I wanted to know" ZA/19.

Table 2. Reasons Analysis

No	Data	Respondens
1	The reason they download and use ChatGPT is to make things easier and help complete tasks	N/19, JA/19, MZ/19, RS/22, FP/22, RA/19, S/19 I/20
2	When they use chatgpt they just want to try it out and want to find out information	ZA/19,

2. Student learning behavior using ChatGPT and student learning behavior when completing assignments and exams

The changes in learning behavior that students felt before using AI ChatGPT and after using AI ChatGPT, AI ChatGPT had an impact on student learning behavior regarding the learning process at home, where students felt a change in their learning behavior from before not using AI ChatGPT and after using AI ChatGPT.

The following are interview results that explain ChatGPT users and student learning behavior when completing assignments and exams. Based on the narrative JA/19, RS/22, FP/22, RA/19.

"I was helped by ChatGPT." JA/19

"Yes, because when the assignment references I get are not satisfactory, I almost always use ChatGPT" RS/22

"No effect wirrrr, just stuck hahaha", FP/22

"That's right" RA/19

Positive Impact

As for the positive impact of using ChatGpt, namely shortening time, some students said that time was shorter when doing assignments.

"Don't waste your time okay." (N/19)

"The task was completed quickly because it was helped by ChatGPT." (JA/19)

"Save time and get more definitive answers." (RA19).

Apart from shortening time, students also often use it to seek new insights and develop thought patterns.

"Enthusiasm to find out new things." (MZ/19).

"Expanding reference". (RS/22)

"My curiosity was answered." (ZA/19).

"Many new insights were gained and made things easier in several situations." (FP/22).

"My analytical mindset is easy to develop." (I/20).

"I can ensure that the assignments I do are correct, ensure understanding of the material, etc." (S/19).

Table 3. Positive Impact

No	Data	Respondens
1	As for the positive impact of using ChatGpt, namely shortening time, some students said that time was shorter when doing assignments.	N/19, JA/19, RA/19
2	Apart from shortening time, students also often use it to seek new insights and develop thought patterns	MZ/19, RS/22, ZA/19, FP/22, I/20, S/19

Negative Impact

From the results of a survey via questionnaire, several students stated that using ChatGpt can cause several negative impacts because it causes dependence when used frequently.

"If you use it too often you become dependent, so if you really need to use it while you can, it's better not to," (N/19).

"increasingly lazy, has a dependent nature." (JA/19).

"Becoming lazy and dependent". (FP/22).

Dependence is not the only thing that happens when you frequently use ChatGpt, but there are also several things, one of which is laziness and also a gap between the answers issued by ChatGpt and what is searched.

"Makes you lazy and takes things for granted." (MZ/19).

"Lazy about reading journals." (RA/19).

"Sometimes the understanding is the same as the lecturer, but the focus is different, so it's still wrong - or even wrong." (S/19).

"Too lazy to look for other references, lazy to read books." (ZA/19).

"Being lazy". (RS/22).

Some students think that ChatGpt language has a negative impact. However, some of them also think that using ChatGpt does not have any negative impacts because they have not felt any negative impacts.

"So far we haven't felt any negative impacts." (I/20).

Table 4. Negative Impact

No	Data	Respondens
1	From the results of a survey via questionnaire, several students stated that using ChatGpt can cause several negative impacts because it causes dependence when used frequently	N/19, JA/19, FP/22
2	Dependency is not the only thing that happens when you frequently use ChatGpt, but there are also several things, one of which is laziness and there are also defects between the answers issued by ChatGpt and what is searched.	MZ/19, RA/19, S/19, ZA/19, RS/22
3	Some students do think that ChatGpt's language has a negative impact. However, some of them also think that using ChatGpt does not have any negative impacts because they have not experienced any negative impacts	I/20

The impact of ChatGPT usage on changes in students' learning behavior, including aspects such as engagement, motivation, and how students utilize technology in the learning process. Based on the findings in this article, the use of ChatGPT can bring significant changes to students' learning behavior, with both positive effects and challenges that need to be considered.

One of the most noticeable changes is the increased student engagement in learning (Carr, 2023; Adiguzel et al, 2023). ChatGPT, as an AI-based tool, provides students with easier and faster access to the information they need, encouraging them to be more active in seeking answers or clarifications (Javaid et al., 2023). This can significantly boost students' motivation, as they feel more independent and capable of gaining a deeper understanding of the material being studied (Song & Song, 2023). When students can instantly access relevant information, they are more likely to feel confident in continuing their learning journey.

However, there are challenges that need to be addressed. According to Buselic (2023), One of these is the potential dependency on technology, where students may rely too heavily on ChatGPT to answer questions without attempting to fully understand the material. This could reduce their critical thinking abilities, as they might take the answers provided by ChatGPT without further questioning or analysis (Guo & Lee, 2023). Therefore, it is crucial for educators to offer proper guidance on how to use this technology within the context of learning.

ChatGPT usage can alter how students collaborate (ElSayari, 2024). With ChatGPT's ability to provide instant information, students can more easily share knowledge and engage in group discussions, enhancing collaboration in the classroom (Kim et al, 2024). However, this might also create a divide between students who are proficient in using this technology and those who may not have mastered it yet, presenting an issue of unequal access that needs to be addressed (Nouara & Dehbia, 2023). The use of ChatGPT in learning has the potential to increase the efficiency and effectiveness of student learning. However, it is important for educators to ensure that students do not rely solely on technology but use it as a tool to deepen their understanding of the material. A balanced approach between technology and critical thinking skills should be developed to optimize the benefits of using ChatGPT in the learning process.

4. CONCLUSION

ChatGpt is not something new, especially among students. In this research, we created a questionnaire to see whether there is an influence of ChatGpt that causes changes in learning behavior. From the results of the discussion above, it is known that many students already know and use ChatGpt. Where ChatGpt is a computer development program which definitely has an impact or has an influence, both positive and negative.

The results of the survey that we made through a questionnaire were around 9 male and female students who filled out the questionnaire and it was seen that the majority of students thought that ChatGpt could change student learning behavior. Where some people argue that ChatGpt has a positive impact such as shortening the time for completing tasks or being more time efficient. However, some students also think that using ChatGpt if used too often can have negative impacts. So it can be concluded that ChatGpt will have a positive or negative impact depending on the user, how the individual uses and processes data from ChatGpt.

REFERENCES

- Abdussamad, Z.S. M. (2021). *Metode Penelitian Kualitatif*. CV. Syakir Media Press.
- Adiguzel, T., Kaya, M. H., & Cansu, F. K. (2023). Revolutionizing education with AI: Exploring the transformative potential of ChatGPT. *Contemporary educational technology*, 15(3), 429. <https://10.30935/cedtech/13152>
- Allen, P. M. (2000). Knowledge, ignorance, and learning. *Emergence, A Journal of Complexity Issues in Organizations and Management*, 2(4), 78-103. https://doi.org/10.1207/S15327000EM0204_09
- Buselic, V. (2023, December). Teaching Information Literacy and Critical Thinking Skills in Chat GPT Time. In 2023 International Conference on Computing, Networking, Telecommunications & Engineering Sciences Applications (CoNTESA) (pp. 14-20). IEEE.
- Carr, B. (2023). Revolutionizing education: Unleashing the power of Chat GPT/AI to empower educators. *Technology and the curriculum: Summer 2023*.
- ElSayary, A. (2024). An investigation of teachers' perceptions of using ChatGPT as a supporting tool for teaching and learning in the digital era. *Journal of computer assisted learning*, 40(3), 931-945.
- Fadhallah, S. M. (2020). *Wawancara*. UNJ PRESS.
- Guo, Y., & Lee, D. (2023). Leveraging ChatGPT for enhancing critical thinking skills. *Journal of Chemical Education*, 100(12), 4876-4883. <https://pubs.acs.org/doi/10.1021/acs.jchemed.3c00505>
- Hasyim, S., Khaira. M., Karunia. G.C.M., Limbong. J.A.,Amelia. D. (2023). Pengaruh Penggunaan Chat Gpt Terhadap Minat Baca Mahasiswa. *Edutech: Jurnal teknologi Pendidikan*. 22 (3). 269-279. <https://doi.org/10.17509/e.v22i3.62944>
- Hadi, A. satria. (2020). Pengaruh Paparan, Afinitas, dan Ketergantunganterhadap Perilaku Pembelian Ulang Konsumen. *Modus*. 32(1). 66–79. <https://doi.org/10.24002/modus.v32i1.3209>
- Javaid, M., Haleem, A., Singh, R. P., Khan, S., & Khan, I. H. (2023). Unlocking the opportunities through ChatGPT Tool towards ameliorating the education system. *Bench Council Transactions on Benchmarks, Standards and Evaluations*, 3(2), 100115. <https://doi.org/10.1016/j.tbench.2023.100115>
- Kok, J. N., Boers, E. J., Kosters, W. A., Van der Putten, P., & Poel, M. (2009). Artificial intelligence: definition, trends, techniques, and cases. *Artificial intelligence*, 1(270-299), 51.
- Kim, D. W., Jang, H. Y., Kim, K. W., Shin, Y., & Park, S. H. (2019). Design characteristics of studies reporting the performance of artificial intelligence algorithms for diagnostic analysis of medical images: Results from recently published papers. *Korean Journal of Radiology*, 20(3), 405–410. <https://doi.org/10.3348/kjr.2019.0025>
- Kim, H. K., Roknaldin, A., Nayak, S. P., Zhang, X., Twyman, M., Hwang, A. H. C., & Lu, S. (2024, April). Empowering computer-supported collaborative learning with ChatGPT: investigating effects on student interactions. In 2024 ASEE PSW Conference. <https://10.18260/1-2--46032>
- Mania, S. (2008). Observasi sebagai alat evaluasi dalam dunia pendidikan dan pengajaran. *Lentera Pendidikan: Jurnal Ilmu Tarbiyah Dan Keguruan*, 11(2), 220-233. <https://10.24252/lp.2008v11n2a7>

- Maulana, M. J., Darmawan, C., & Rahmat, R. (2023). Penggunaan Chatgpt Dalam Tinjauan Pendidikan Berdasarkan Perspektif Etika Akademik. *Bhineka Tunggal Ika: Kajian Teori dan Praktik Pendidikan PKN*, 10(1), 58-66. <https://10.36706/jbti.v10i1.21090>
- Misnawati. (2023). ChatGPT: Keuntungan, Risiko, Dan Penggunaan Bijak Dalam Era Kecerdasan Buatan. *Jurnal Prosiding Mateandrau*. 2(1), 2023. <https://doi.org/10.55606/mateandrau.v2i1.221>
- Nouara, M., & Dehbia, M. (2023). *Students' Attitudes towards and Teachers' Perceptions of the Utilization of ChatGPT to Improve Students' Writing Proficiency* (Doctoral dissertation, Mouloud Mammeri University).
- Nugroho, A. yuniar. (2013). Faktor-Faktor Yang Mempengaruhi Perilaku Belajar Mahasiswa Terhadap Prestasi Akademik. *Jurnal Pendidikan Konseling*. 4(2). 23-31. <https://10.22219/cognicia.v11i2.29010>
- Pakpahan, A. F., Prasetyo, A., Negara, E. S., Gurning, K., Situmorang, R. F. R., Tasnim, T., ... & Rantung, G. A. J. (2021). *Metodologi penelitian ilmiah*. Penerbit Yayasan Kita Menulis
- Pristiwanti, D., Badariah, B. ., Hidayat, . S. ., & Dewi, R. S. . (2022). Pengertian Pendidikan. *Jurnal Pendidikan Dan Konseling (JPDK)*, 4(6), 7911–7915. <https://doi.org/10.31004/jpdk.v4i6.9498>
- Safitri, edi. (2022). Dampak Bermain Game Online Terhadap Perilaku. *Jurnal Pendidikan Perilaku*. 3 (2). 20-31.
- Sholihatin, E., Saka, A. D. P., Andhika, D. R., Ardana, A. P. S., Yusaga, C. I., Fajar, R. I., & Virgano, B. A. (2023). Pemanfaatan Teknologi Chat GPT dalam Pembelajaran Bahasa Indonesia di Era Digital pada Mahasiswa Universitas Pembangunan Nasional Veteran Jawa Timur. *JURNAL TUAH: Pendidikan dan Pengajaran Bahasa*, 5(1), 1-10.
- Siswoyo, D. P. (2007). *Pusat Pendidikan dan Latihan Sepak Bola di Sragen" Transformasi Permainan Sepak Bola ke Dalam Bentuk dan Gubahan Masa Bangunan"*. Universitas Islam Indonesia. <http://hdl.handle.net/123456789/22826>
- Song, C., & Song, Y. (2023). Enhancing academic writing skills and motivation: assessing the efficacy of ChatGPT in AI-assisted language learning for EFL students. *Frontiers in psychology*, 14, 1260843. <https://doi.org/10.3389/fpsyg.2023.1260843>
- Suharmawan, W. (2023). Pemanfaatan Chat GPT Dalam Dunia Pendidikan. *Education Journal: Journal Educational Research and Development*. 7(2). 158-166.
- Wibowo, T. U. S. H., Akbar, F., & Fauzan, M. S. (2023). Tantangan dan peluang penggunaan aplikasi chat GPT dalam pelaksanaan pembelajaran sejarah berbasis dimensi 5.0. *Jurnal Petisi (Pendidikan Teknologi Informasi)*, 4(2), 69-76. <https://e-journal.unimudasorong.ac.id/index.php/jurnalpetisi/article/view/782>