Jurnal Sains Teknologi dan Sistem Informasi
journal.yp3a.org/index.php/satesi
Vol. 5 No. 1 (2025) 88 – 98 ISSN Media Elektronik: 2807–8152

# The Influence of Personal Innovativeness on ChatGPT Continuance Usage Intention among Students

Satrio Tegar Sadewo[1*], Shinta Ratnawati[2], Axel Giovanni[3], Ipuk Widayanti[4]
[1,2,3,4]Department of Management, Faculty of Economics, Universitas Tidar, Indonesia
Email: [1]satrio.sadewo@untidar.ac.id, [2]shinta_ratna@untidar.ac.id, [3]axelgiovanni@untidar.ac.id, [4]ipuk.widayanti@untidar.ac.id

***ABSTRACT***
*The rapid advancement of generative AI technologies, such as ChatGPT, has introduced significant innovations across various sectors. However, the factors influencing the continuance usage intention of these technologies remain underexplored, particularly among university students in Indonesia. This study investigates the role of Personal Innovativeness within the framework of the Technology Acceptance Model (TAM) in determining students' intentions to continue using ChatGPT. The study used a quantitative method, involving a survey of 252 Indonesian university students. The survey measured Personal Innovativeness, Perceived Ease of Use, Perceived Usefulness, and Continuance Usage Intention using validated measures on a Likert scale with five points. Partial Least Squares Structural Equation Modeling (SEM-PLS) was utilized to evaluate the evidence. The results demonstrate that all three factors have a favorable effect on the desire to continue utilizing ChatGPT. Theoretically, this study expands the Technology Acceptance Model (TAM) by incorporating Personal Innovativeness, offering new insights into factors that sustain long-term technology engagement. This integration contributes to the growing body of knowledge on technology adoption and its continued use, especially within educational contexts. Practically, the results underscore the importance of developing user-friendly and beneficial AI tools and fostering an innovative mindset among students to enhance sustained engagement. Future research should consider longitudinal studies and more diverse populations to further elucidate the factors influencing the continuance usage intention of AI technologies in educational contexts. These insights have significant implications for educators and developers aiming to improve the adoption and sustained use of AI tools like ChatGPT in education.*

*Keywords: Personal Innovativeness, Technology Acceptance Model, Continuance Usage Intention, Artificial Intelligence, ChatGPT.*

## 1. Introduction

The rapid development of information technology is characterized by groundbreaking advancements in generative AI, with tools like ChatGPT revolutionizing various fields. In the realm of education, the integration of ChatGPT into learning environments has resulted in transformative innovations by offering personalized resources and instantaneous feedback for students. Such advancements enable learners to engage with study materials at their own pace, fostering individualized educational approaches that accommodate diverse styles and needs [1]. This potential highlights the necessity of understanding and addressing factors influencing the sustained use of these technologies in diverse educational settings [2]. In the health sector, ChatGPT has introduced notable innovations. In hospital pharmacies, it plays a critical role in retrieving pharmacological information, advising on therapy, and managing drug-drug interactions [3]. ChatGPT has demonstrated effectiveness in answering complex surgical questions by achieving a correct response rate of 76% on a surgical board exam [4]. Additionally, ChatGPT potentially improving communication understanding and engagement between radiologists and patients [5]. In business field, the utilization of ChatGPT able to provide a renewed innovation. The AI technology assists in loan origination, credit score assessment, risk evaluation, and approval processes in financial sector [6]. This technology also helps small-medium enterprise by providing essential information for decision-making, creating targeted marketing strategies, enhancing customer engagement, and brand loyalty [7].

The widespread usage of Generative AI technology is crucial for empowering its innovative potential. One of the notable factors that may influence the use of Generative AI technology is Personal Innovativeness (PI). Individuals with high PI are more have a positive

Diterima Redaksi: 05-03-2025 | Selesai Revisi: 15-03-2025 | Diterbitkan Online: 20-04-2025

perception of technological innovations [8]. PI can also mitigate perceived risks associated with adopting new technologies, thus enhancing the likelihood of acceptance among users [9]. PI has been shown in numerous research to be reliable indicator of behavioral intention in the setting of online educational platforms [10] and fintech product [11]. However, PI is not always becoming a determinant factor of the technology product usage. In educational settings, studies have shown that even less experienced faculty members with less PI can still adopt technology effectively due to supportive institutional environments and training [12]. Furthermore, factors like financial literacy and saving habits can play a more critical role than PI in the context of financial technologies adoption [13]. Thus, this study is meant to examine the effects of PI on ChatGPT utilization in particular scenarios.

Researching personal innovativeness and AI usage among Indonesian students is vital due to the country's unique demographic and educational challenges. Indonesia's youthful population and growing digital infrastructure create significant opportunities for AI to transform learning processes and address disparities in access to quality education [14]. However, Indonesia's diverse cultural and socio-economic context necessitates a deeper understanding of how students adopt and sustain the use of AI technologies [15], [16]. Addressing these factors is crucial for empowering students to succeed in an increasingly globalized, technology-driven economy, while also providing educators with insights to develop inclusive and effective AI-driven strategies [17], [18].

Although the body of research on ChatGPT is expanding, some significant gaps still require further exploration into specific aspects of its usage. Previous research that explores continuance usage intention of ChatGPT users have employed several theories, such as Technology Continuance Theory [19], Self-Determination Theory [20], Unified Theory of Acceptance and Use of Technology, Stimulus–Organism–Response Model [21], but limited for Technology Acceptance Model (TAM) [22]. While PI was investigated to estimate the behavior intention and actual behavior [23], predict the willingness to pay [24], or as a moderation variable of ChatGPT's usage behavior [25], [26]. However, PI is less explored to predict the continuance usage of ChatGPT's users [27]. In the context of ChatGPT's Indonesian user, the role of PI in determining the continuance usage is unexplored [28]. Therefore, this research wants to fill these gaps by investigating the role of PI on continuance usage intention of ChatGPT's users in Indonesia.

This research objective primarily focuses to investigate the role of PI within the framework of the TAM in assessing Indonesian Gen-Z customers' intention to continue using ChatGPT. Specifically, the study will examine how PI, along with Perceived Ease of Use (PEOU) and Perceived Usefulness (PU), influences users' continuance usage intentions. Additionally, the research will evaluate primary impacts of PI on continuance usage intention through PEU and PU, thereby offering a thorough comprehension of the elements influencing continued ChatGPT engagement.

This paper is organized to fulfill the research objectives. The subsequent section discusses the relevant works on PI, TAM, and continuance usage intention, offering a theoretical foundation for the study. The section on methodology provides specifics about the sample, study design, data gathering approaches, and investigative approaches used. The results and discussion segment presents the discoveries from the structural equation modeling, providing clear and concise results, and explaining their significance. This section also addresses the study's limitations and contextualizes the study's nature and results with other relevant published data. The conclusion section summarizes the results and answers the research objectives while providing suggestions for further study and detailing real-world uses for the results

## 2. Literature Review

### 2.1. Continuance Usage Intention

Continuance Usage Intention (CUI) is a crucial notion in understanding the lasting success of information systems. The idea of CUI highlights that initial approval is not enough to maintain engagement and that taking into account continued usage is crucial to these systems' sustainability [29]. Previous research also defines CUI as the subjective tendency of users to continue using a system depending on how satisfied they are and how beneficial they think that system is [30]. From a psychological standpoint, CUI emerges when users perceive that a technology consistently meets their expectations and delivers value tailored to their needs [31].

Prior research has demonstrated that performance expectancy, facilitating conditions, and user satisfaction significantly impact continuance intention across different contexts, such as mobile banking and food delivery applications [30], [32]. Furthermore, customers' intentions to remain with a service are greatly influenced by outside variables including perceived security and social influence [33], [34]. This research defines the continuance intention of using ChatGPT for academic purposes as students' desire to continue utilizing and gaining advantages from ChatGPT in their studies. In the context of ChatGPT, investigating how personal innovativeness interacts with perceived ease of use and perceived usefulness offers a valuable framework for understanding what drives continued engagement among users.

### 2.2. Technology Acceptance Model

In the late 1980s, a U.S. academician developed the Technology Acceptance Model (TAM) [35]. This model was built upon the Theory of Reasoned Action

DOI: 10.54259/satesi.v5i1.4117

(TRA) proposed by Fishbein and Ajzen [36]. One of the significant advantages of TAM is its simplicity and ease of application, which allows researchers to predict technology acceptance effectively. Studies have shown that TAM can explain a substantial proportion of variance in users' behavioral intentions by around 40% [37], [38]. This model has been widely adopted to predict how users accept and utilize new technologies across various fields, including healthcare, education, and e-commerce [39]–[41]. However, TAM has been criticized for its limited scope despite of the widespread usage. TAM primarily focuses on cognitive factors and may overlook emotional and social influences that also play a role in technology acceptance [42]–[44].

The limitations of TAM include its potential oversimplification of the acceptance process and the neglect of contextual factors that may affect user behavior. Critics argue that while TAM effectively identifies key determinants of acceptance, it does not account for the complexities of user interactions with technology in real-world settings [45], [46]. Furthermore, because users may not fully express their genuine intents or feelings around technology use, the model's emphasis on their own assessment may introduce subjectivity [47], [48]. Yet, TAM remains a foundational model in the study of technology acceptance to provide useful information on user behavior that directs the creation of technological systems that meet the requirements and expectations of users.

### 2.3. Perceived Ease of Use

TAM posits that Perceived Ease of Use (PEOU) is a critical factor influencing users' behavioral intentions to adopt new technologies [49], [50]. From a psychological perspective, PEOU occur when a clear and understandable system enhances the user's willingness to engage with technology without significant cognitive or physical strain [51]. Additionally, PEOU is not only about the absence of effort but also encompasses the overall user experience, which includes how intuitive and accessible the system is [52]. From these perspectives, PEOU can be defined as a construct that reflects an individual's belief that utilizing a particular system will require minimal effort.

Previous study found that PEOU significantly affects continuance intention in the context of telemedicine, highlighting its role in shaping user attitudes towards technology adoption [53]. Similarly, another research indicates that PEOU has a positive impact on satisfaction, which in turn influences continuous usage intention in community group buying platforms [54]. In the different context, PEOU significantly affects continuance intention across various social networking services [55].

### 2.4. Perceived of Usefulness

Perceived Usefulness (PU) is an important feature for comprehending the adoption of information system and continued usage. This construct is also included in TAM as the critical factors that influence the behavior intention. PU is generally believed to be the degree to which people believe that utilizing a specific technology would enhance their skills or output [31]. This belief plays a crucial part in influencing consumers' adoption behavior by enhancing their understanding of the advantages of the technology. PU is also linked to users' perceptions of how effectively a system can aid in performing specific tasks. For instance, in gamified learning environments, PU is viewed as a factor that drives user satisfaction and active engagement, as it reflects how the system supports their goals and tasks effectively [56] Additionally, another study emphasizes that PU represents individuals' subjective evaluations of the benefits they perceive from their technology use [57]. These perspectives highlight the practical utility of technology in enabling users to achieve their desired outcomes efficiently and effectively.

According to this study, PU is defined as the extent to which users believe ChatGPT improves their productivity in both professional and academic settings. By understanding PU as a critical determinant, this study examines its character in influencing the continuance usage intention of ChatGPT between Gen-Z users in Indonesia.

### 2.5. Personal Innovativeness

A key idea in comprehending individual variations in embracing and interacting with new technology is personal innovativeness (PI). It is described as a person's readiness to experiment with new advancements and information technology [58]. This concept also reflects an individual's readiness to experience new features, emphasizing the exploratory nature of PI [59]. Additionally, PI represents the extent to which an individual embraces new innovations before others, making it a distinguishing characteristic among consumers [60]. In the context of this study, PI refers to the degree of openness and willingness of Indonesian Gen-Z users to explore and engage with ChatGPT, reflecting their readiness to adopt this generative AI technology as part of their academic and professional activities.

Personal innovativeness has been thoroughly investigated as a subject impacting users' engagement with technology over time. It is observed that people with greater degrees of innovation are more open to adopting and continuing the use of new information system. This relationship is often mediated or moderated by various factors. For example, perceived value and satisfaction have been identified as mechanisms through which personal innovativeness affects continued usage [61]. Additionally, perceived

DOI: 10.54259/satesi.v5i1.4117

behavioral control and external factors, such as risk and security, further shape this relationship [62]. Studies across diverse contexts emphasizes the function of personal innovativeness to serve as a relevance factor in understanding technology usage patterns.

## 3. Methodology

To investigate the factors impacting university students in Indonesia's intention to continue using ChatGPT, a quantitative study method was employed. The study utilized a hypothesis-driven approach, testing the relationships between variables derived from the Technology Acceptance Model and Personal Innovativeness. Data was acquired using a structured questionnaire, and the evaluation was done using structural equation modeling with partial least squares (SEM-PLS). SEM-PLS was selected because to its capacity to manage intricate models with several latent variables and indicators, as well as its resilience when handling data that is not regularly distributed and small-to-moderate sample sizes, making it suitable for this study [63]. A popular technique for multivariate data analysis among academics in the social sciences and business is SEM-PLS. It is mostly used to investigate models with latent variables, offering a reliable way to explore intricate structures [64], [65].

University students in Indonesia were part of the study's population, and a purposive sampling technique was used to choose the sample. Purposive sampling is a method in which the investigator deliberately chooses participants with particular attributes pertinent to the study goals [66]. This approach targeted individuals who met specific criteria: they were members of Generation Z (aged 17–25 years), actively enrolled in Indonesian universities, users of ChatGPT, and Indonesian nationals. The study included 252 responders in total, comprising 84.1% from social and humanities majors and 15.9% from STEM majors. The gender distribution showed that 72.2% of people were women and 27.8% of people were men. Age-wise, 89.3% were between the ages of 17 and 19, 9.9% were between the ages of 20 and 22, and 0.8% were between the ages of 23 and 25. Regarding the type of university, 7.1% of respondents were from private universities, while the remaining 92.9% were from public universities. The respondents' demographic characteristics displayed in the Table 3.1.

Online data collection took place during November and December 2024, with digital media being used to disseminate the questionnaire. The survey included Likert five-point scales to gauge the main constructs, ranging from "Strongly Agree" to "Strongly Disagree". The constructions were adjusted to account for Indonesian university students' use of ChatGPT, and they were derived from previously validated instruments to assure consistency and accuracy. Appendix 1 provides a summary of the assessment items used in this research.

Table 3.1 The survey participants' demographic attributes

| Measure | Items | Frequency | Percentage |
|---|---|---|---|
| Major | Social and Humanities | 212 | 84.1% |
| | STEM | 40 | 15.9% |
| Gender | Male | 70 | 27.8% |
| | Female | 182 | 72.2% |
| Age | 17–19 years | 225 | 89.3% |
| | 20–22 years | 25 | 9.9% |
| | 23–25 years | 2 | 0.8% |
| Type of University | Private | 18 | 7.1% |
| | Public | 234 | 92.9% |

Source: Author (2025)

The software SmartPLS was used to evaluate the data using SEM-PLS, which is an appropriate technique for assessing complex models and managing small-to-moderate sample numbers [67]. The evaluation of the assessment model and the evaluation of the framework model were the two primary phases of the evaluation process. The Fornell-Larcker threshold, which demands that the square root of each variable's AVE be higher than the relationships between the constructs, was used to assess the measurement model. Cronbach's alpha and composite reliability should to be greater than 0.7, and Average Variance Extracted (AVE) should has a minimum threshold of 0.5 [68]. The structural model evaluation involved testing the hypothesized relationships using path coefficients and t-values. The significance of the path coefficients was determined through bootstrapping procedures, with a recommended sample size of 5,000 resamples to ensure robust estimates. Furthermore, the explanatory power ($R^2$) were assessed to give the percentage of each endogenous variable's variance that can be accounted for by the exogenous variables. [63].

### 3.1. Hypotheses Development

The theoretical structure from the Technology Acceptance Model and the concept of Personal Innovativeness serves as the foundation for the hypotheses developed for this investigation. This section outlines the hypotheses that were tested in this study and talks about the links between the variables. Also, Figure 3.1 illustrates a research model developed in this research.

One important factor influencing users' behavioral intentions to adopt and continue using emerging innovations is perceived ease of use. Perceived ease of use has been shown to have a major impact on continuance intention in a variety of scenarios, including social networking services and telemedicine (J. Wang & Cao, 2022; Jo, 2022). In the context of ChatGPT, it has been suggested that if consumers find technology convenient to operate, they are more likely to remain with it. Thus, the following is how the initial hypothesis is put out:

DOI: 10.54259/satesi.v5i1.4117

H1: Perceived Ease of Use has a positive significant influence on Continuance Usage Intention.

Perceived Usefulness is another crucial concept in comprehending the use of technology and continued usage. In the context of ChatGPT, Perceived Usefulness can be conceptualized as the extent to which users perceive that ChatGPT enhances their productivity in academic and professional activities. Previous research has shown that Perceived Usefulness drives user satisfaction and active engagement (Roslan et al., 2023). Therefore, the second hypothesis is formulated as follows:

H2: Perceived Usefulness has a positive significant influence on Continuance Usage Intention.

The eagerness of an individual to experiment with new inventions and information technology is known as Personal Innovativeness [58]. It reflects an individual's readiness to experience new features and adopt new technologies earlier than others [60]. Studies have shown that People with greater degrees of personal innovation are more willing to embrace and keep using new technology [61]. In the context of ChatGPT, Personal Innovativeness can be seen as a critical factor influencing users' engagement and continuance usage intention. Thus, the following is the structure of the third hypothesis:

H3: Personal Innovativeness has a positive and significant influence on Continuance Usage Intention

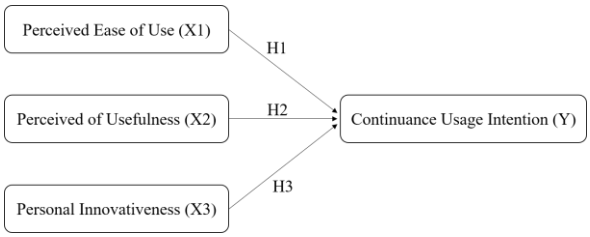


Figure 3.1 Research Model

## 4. Results and Discussion

### 4.1. Measurement Model Result

As exhibited in Table 4.1, internal consistency reliability was assessed using Cronbach's alpha and Composite Reliability (CR). All constructs demonstrated satisfactory reliability, as their Cronbach's alpha values exceeded the recommended threshold of 0.7 [65], [69], [70]. Similarly, all constructs' CR values were likewise higher than the suggested threshold of 0.7 [71]. These results confirm that the measurement items reliably reflect their respective constructs.

The reliability of convergence was evaluated using the Average Variance Extracted (AVE); results higher than 0.5 indicate adequate reliability [72]. These values suggest that a significant portion of variance is captured by the constructs from their indicators. Factor loadings of the measurement items were all above the acceptable threshold of 0.7, demonstrating strong item reliability [73].

### 4.2. Structural Model

The structural model's outcomes evaluation is presented in Table 4.2 and the corresponding structural model is shown in Figure 4.1. The analysis shows the standardized estimates and the significance levels of the hypothesized relationships in the research model. Analysis results revealed that Perceived Ease of Use had a significant positive impact on Continuance Usage Intention. The path coefficient between PEOU and CUI was 0.233, with a t-statistic of 4.661 and a p-value of 0.000. This supports the hypothesis H1, indicating that higher intentions for remaining using ChatGPT are linked to more positive opinions about its usability.

Similarly, Perceived Usefulness was found to have a significant positive impact on Continuance Usage Intention. The path coefficient was 0.360, the t-statistic was 6.568, and the p-value was 0.000. This result supports hypothesis H2, indicating that users are more probable to plan to keep using ChatGPT if they find it useful.

Table 4.1 Measurement Framework Outcome

| Variables | Items | Loadings | Cronbach's Alpha | CR | AVE |
|---|---|---|---|---|---|
| PI | PI1 | 0,716 | 0,720 | 0,824 | 0,539 |
| | PI2 | 0,770 | | | |
| | PI3 | 0,732 | | | |
| | PI4 | 0,717 | | | |
| PU | PU1 | 0,753 | 0,711 | 0,826 | 0,613 |
| | PU2 | 0,765 | | | |
| | PU3 | 0,830 | | | |
| PEOU | PEOU1 | 0,855 | 0,885 | 0,929 | 0,813 |
| | PEOU2 | 0,923 | | | |
| | PEOU3 | 0,925 | | | |
| CUI | CUI1 | 0,887 | 0,836 | 0,901 | 0,752 |
| | CUI2 | 0,872 | | | |
| | CUI3 | 0,842 | | | |

Source: Author (2025)

Personal Innovativeness also showed a substantial positive outcome on Continuance Usage Intention. The t-statistic was 2.350, the p-value was 0.019, and the path coefficient was 0.144. This finding supports hypothesis H3, implying that individuals with higher personal innovativeness have stronger continuance intentions towards ChatGPT.

Table 4.2 Result of Hypothesis Testing

| Hypo-theses | Paths | $\beta$ | T-statistics | p-Value | Supported [Yes/No] |
|---|---|---|---|---|---|
| H1 | PEOU --> CUI | 0,233 | 4,661 | 0,000 | Yes |
| H2 | PU --> CUI | 0,360 | 6,568 | 0,000 | Yes |
| H3 | PI --> CUI | 0,144 | 2,350 | 0,019 | Yes |

Source: Author (2025)

The coefficient of determination ($R^2$) for the endogenous construct Continuance Usage Intention indicates the portion that the independent factors account for in explaining variation in continuing usage

DOI: 10.54259/satesi.v5i1.4117

intention. As shown in the Figure 4.1, the $R^2$ value for Continuance Usage Intention was found to be 0.319, This finding indicates that 31.9% of the variance in continuance usage intention is explained by the model.

## 5. Discussion

This study primarily investigated the influence of Personal Innovativeness on the continuance usage intention of ChatGPT among Indonesian Gen-Z university students. By integrating Personal Innovativeness into the framework of the TAM, alongside complementary constructs such as Perceived Ease of Use and Perceived Usefulness, the study aimed to understand how these factors affect students' intentions to continue using ChatGPT.

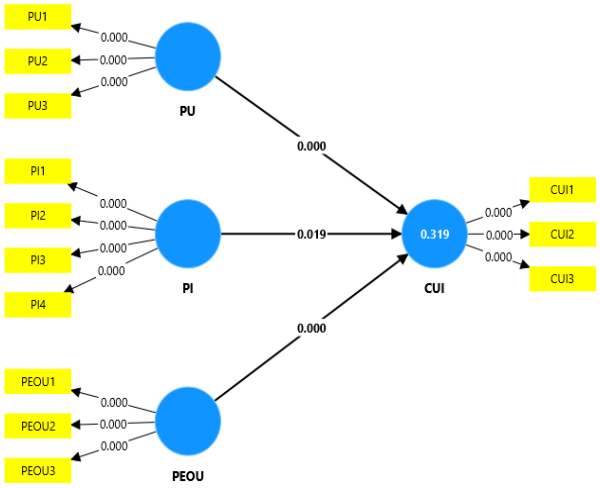


Figure 4.1 Structural Model Result

To begin with, this study proposed and empirically demonstrated that Perceived Ease of Use significantly impacts students' intention to remain using ChatGPT. This outcome is in line with earlier studies on AI technologies and higher education [74], [75]. Conversely, this finding deviates from other research conducted on AI drawing tools and cloud e-learning applications [76], [77]. The inconsistency in findings may be attributed to differences in the context and nature of the technologies studied. This contradiction suggesting that the impact of Perceived Ease of Use on continuance intention can vary depending on the specific application and user needs. It implies that when learners perceive using ChatGPT to be simple and free of unnecessary hassles, they are more probable to persist with it. This significant impact of Perceived Ease of Use on continuance usage intention will enhance the user fulfilment and encourages repeated use due to the reduction of effort required to use the technology. Additionally, an intuitive interface can improve user efficiency in achieving their goals and deliver a more positive user experience. Ease of use also fosters a sense of competence and confidence among users that can increase their willingness to engage with the technology regularly. Finally, technology can seamlessly integrate into user daily routines when the technology requires minimal effort to operate. This study highlights the importance of creating easy to use interfaces to encourage ongoing engagement with ChatGPT.

Secondly, our study found that Perceived Usefulness significantly influences students' intention to continue using ChatGPT. This result aligns with previous research in regards to university and AI tools [74], [75], [78]. Nevertheless, this outcome contrasts with findings in other domains such as ride-sharing applications and social networking services where Perceived Usefulness did not significantly influence continuance intention [55], [79]. The disagreement may arise from differences in the nature of the technologies and the specific needs of users in each context. In this research, students might be more motivated to continue using it because they perceive ChatGPT as genuinely beneficial and enhancing their academic performance. The significant effect of Perceived Usefulness on continuance intention can be caused to the tangible value the technology provides in helping students achieve their educational goals. Unlike Perceived Ease of Use which emphasizes the simplicity of using the technology, Perceived Usefulness focuses on the meaningful impact and practical benefits the tool delivers. Recognizing that ChatGPT effectively improves learning outcomes and supports academic tasks encourages students to integrate it into their daily study routines. The ability of ChatGPT to provide quick answers, assist with complex problem-solving, and offer personalized learning experiences increases its value proposition. This study emphasizes how crucial it is to draw attention to ChatGPT's useful features and real-world applications to foster sustained engagement among students.

Thirdly, our result found that Personal Innovativeness significantly influences students' intention to continue using ChatGPT. This result is in line with earlier studies emphasizing the vital role that personal innovation plays in the adoption and continuous use of technology. Previous studies also discovered that Personal Innovativeness significantly influenced users' continuance intention to use in the context of social media users in China [80] and mobile commerce services [81], [82]. According to this research, those who are more innovative are more inclined to remain with new technology. In contrast, our findings differ from a study that investigated the determinants of travel apps continuance usage intention and found that Personal Innovativeness did not have a significant impact [26]. This discrepancy might be due to the varying purposes and user motivations associated with each technology. ChatGPT provides an innovative and interactive experience that appeals to individuals high in personal innovativeness, but travel apps might be often utilized out of practical necessity rather than a desire to engage with new technological innovations. Our results suggest that students with higher personal innovativeness are more inclined to continue using ChatGPT because they are naturally more open to

DOI: 10.54259/satesi.v5i1.4117

experimenting with and adopting new technologies. They find satisfaction in exploring cutting-edge tools that enhance their learning experience, which is consistent with their innate drive to lead the way in technological innovation. This emphasizes how crucial it is to help students develop an inventive mindset in order to encourage continued use of educational technology like ChatGPT.

## 6. Conclusion

This study investigated the influence of Personal Innovativeness within the framework of the Technology Acceptance Model on the continuance usage intention of ChatGPT among Indonesian Generation Z university students. By integrating Personal Innovativeness alongside Perceived Ease of Use and Perceived Usefulness, we aimed to understand how these factors affect students' intentions to continue using ChatGPT for academic purposes. The findings reveal that all three factors significantly and positively influence continuance usage intention. Specifically, Students are more likely to stay with ChatGPT if they think it's helpful and simple to use, and if they show more personal creativity. This underscores the importance of designing educational AI technologies that are user-friendly and offer clear benefits to enhance academic performance. Additionally, recognizing the role of personal innovativeness highlights the need to foster an innovative mindset among students to encourage the acceptance and continual use of such technologies.

### 6.1. Practical Implications

The findings of this study offer valuable practical implications for developers of AI technologies, educators, and educational institutions. Firstly, the significant influence of Perceived Ease of Use on students' continuance usage intention underscores the necessity of designing user-friendly interfaces for AI tools like ChatGPT. Developers should prioritize intuitive design principles that simplify navigation and interaction, thereby reducing the learning curve and encouraging sustained usage among students. Secondly, the strong impact of Perceived Usefulness highlights the importance of integrating functionalities that directly enhance academic performance. Developers were encouraged to align AI tools with students' educational needs by providing features such as personalized feedback, interactive learning modules, and resources tailored to curriculum objectives. Demonstrating clear academic benefits can motivate students to regularly incorporate these technologies into their study routines.

Recognizing the role of Personal Innovativeness, educators and educational institution were suggested that nurturing an innovative attitude among scholars can enhance the adoption and sustained use of educational technologies. They can facilitate this by creating environments that encourage exploration and experimentation with new technologies. This could involve integrating AI tools into coursework, offering training workshops, and promoting collaborative projects that utilize innovative technologies. Moreover, educational institutions should consider implementing policies and support systems that promote the use of AI technologies in learning environments. Providing access to necessary technological infrastructure, offering technical support, and emphasizing the relevance of AI tools in academic and future professional contexts can further encourage students to engage with these technologies.

### 6.2. Theoretical Implication

The study's conclusions have important theoretical ramifications for the study of technology acceptance and intention to continue using it. By integrating Personal Innovativeness into the Technology Acceptance Model, this research extends the traditional framework and demonstrates its enhanced applicability in the context of educational AI technologies like ChatGPT. The significant influence of Personal Innovativeness on continuance usage intention suggests that individual traits play a crucial role in technology adoption and sustained use, which is not fully accounted for in the original Technology Acceptance Model.

This study also provides empirical evidence that Personal Innovativeness acts as a valuable antecedent to technology continuance, highlighting the need to consider personal characteristics alongside perceived ease of use and usefulness in acceptance models. The incorporation of Personal Innovativeness enhances the explanatory power of Technology Acceptance Model, suggesting that models of technology acceptance should be extended to include individual difference variables when examining emergent technologies.

Furthermore, the research contributes to the theoretical understanding of how emerging technologies are adopted and sustained among Generation Z users. It underscores the importance of tailoring acceptance models to specific contexts and populations, acknowledging that generational cohorts may exhibit different attitudes and behaviors toward technology. This alignment enhances the relevancy and accuracy of theoretical models in predicting user behavior in rapidly evolving technological landscapes

### 6.3. Limitation

While this study provides valuable insights into the factors influencing the continuance usage intention of ChatGPT among Indonesian Generation Z university students, it's critical to recognize certain constraints. Firstly, the research focused exclusively on a specific demographic, which is Indonesian university students within the Generation Z cohort. This narrow focus may limit the generalizability of the findings to other populations or cultural contexts. Future research should consider replicating this study in different cultural settings or among different age groups to

DOI: 10.54259/satesi.v5i1.4117

assess the universality of these findings. Secondly, the study employed a cross-sectional design, capturing data at a single point in time. This approach does not account for changes in user perceptions or technology adoption behaviors over time. Users' attitudes toward ChatGPT may evolve with increased exposure, changes in academic demands, or as the technology itself advances. Longitudinal studies could provide deeper insights into how these factors influence continuance usage intention over an extended period, capturing the dynamic nature of technology adoption. Thirdly, the reliance on self-reported data through questionnaires may introduce bias, such as social desirability bias or inaccuracies in self-assessment. Participants might have overestimated their Personal Innovativeness or intentions to continue using ChatGPT due to perceived expectations. Interviews or usage analytics might be used to combine alternative data collection methods. This can enhance the validity of future research by providing more objective measures of technology usage.

Furthermore, the research concentrated on three particular elements within the scope of the Technology Acceptance Model. Although these elements had a major impact on the intention to continue using, other potential determinants were not examined. Factors such as social influence [83], facilitating conditions [84], trust [85], or perceived enjoyment [86] might also play crucial roles in technology adoption and sustained use. Future research could expand the model to include these variables, providing a more comprehensive understanding of the factors that drive continued engagement with AI technologies in educational settings. Lastly, technological advancements and the rapidly evolving nature of AI tools like ChatGPT mean that user experiences and perceptions can change swiftly. The study's conclusions are time-sensitive and context-dependent. To guarantee that theoretical models and real-world applications stay relevant, research must be conducted continuously to stay up-to-date of technological advancements and changing user attitudes.

6.4. Appendix

| Construct | Measurement Item | Translated Item | References |
|---|---|---|---|
| PI | I would seek out opportunities to test out new information technologies if I learned about them. | *Jika saya mendengar tentang perkembangan teknologi, saya akan mencari informasi lebih dalam tentang teknologi tersebut.* | |
| | I typically investigate new information technologies before my peers do. | *Di antara teman-teman saya, saya biasanya orang pertama yang mencoba produk teknologi baru.* | [87], [88] |
| | I like to experiment with new information technologies. | *Secara umum, saya tidak ragu untuk mencoba teknologi informasi baru.* | |
| | Generally speaking, I am not afraid to experiment with new information technology. | *Saya suka bereksperimen dengan teknologi informasi baru.* | |
| PU | Using ChatGPT allows me to accomplish task efficiently. | *Menggunakan ChatGPT memungkinkan saya menyelesaikan pekerjaan secara efisien.* | |
| | Using ChatGPT allows me to increase my productivity. | *Menggunakan ChatGPT memungkinkan saya meningkatkan produktivitas.* | [89] |
| | I can get things done faster when I use ChatGPT. | *Menggunakan ChatGPT memungkinkan saya menyelesaikan pekerjaan dengan lebih cepat.* | |
| PEOU | The procedure for using ChatGPT is understandable. | *Prosedur penggunaan ChatGPT dapat dimengerti.* | |
| | It is easy for me to learn how to use ChatGPT. | *Mudah bagi saya untuk mempelajari cara menggunakan ChatGPT.* | [89] |
| | It is easy to make use of ChatGPT. | *Sangat mudah untuk menggunakan ChatGPT.* | |
| CUI | I plan to keep using ChatGPT. | *Saya berencana untuk tetap menggunakan ChatGPT.* | |
| | I want to continue using ChatGPT. | *Saya ingin terus menggunakan ChatGPT.* | [21] |
| | I intend to recommend ChatGPT to my friends. | *Saya bermaksud merekomendasikan ChatGPT kepada teman-teman saya.* | |

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DOI: 10.54259/satesi.v5i1.4117