
DIGITAL MEDIA COMMUNICATION

PERCEIVED EASE OF USE, SOCIAL INFLUENCERS, FACILITATING CONDITIONS, USER EXPERIENCE ON THE INFLUENCE OF HUMAN-MACHINE INTERACTION ON INTERACTION EFFICIENCY, EMOTIONAL IMPACT OF USING CHAT GPT

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Abstract

This research analyzes the impact of Perceived Ease of Use, Social Influence, Facilitating Conditions, and User Experience in GPT Chat and how it affects Interaction Efficiency and Emotional Impact of communication interactions with machines. The theoretical frameworks are the Unified Theory of Technology Acceptance and Use (UTAUT) and Human Machine Interaction (HCI). Data was collected through a questionnaire with a Likert scale and tested on 100 respondents using the Purposive Sampling method among Chat GPT users. The research results reveal that five variables, namely Perceived Ease of Use, Facilitating Conditions, and User Experience, positively and significantly influence Interaction Efficiency and Emotional Impact. Still, the Social Influence variable does not substantially affect User Experience Perceived Ease of Use, and The UTAUT model contributes 17.7% to User Experience. In contrast, User Experience contributes 5.6% to Interaction Efficiency, and Interaction Efficiency contributes 517.9% to Emotional Impact.

Keywords: UTAUT; User Experience; Interaction Efficiency; Emotional Impact; Chat GPT.

Introduction

AI or artificial intelligence, is a computer program that imitates human intelligence, introduced by Professor John McCarthy in 1956. AI technology, such as ChatGPT from OpenAI, has been in the spotlight with its ability to complete various human tasks. As a virtual assistant, ChatGPT helps search for information, stimulates creative ideas, and facilitates daily life. AI, including ChatGPT, has become a loyal partner in human productivity, changing how we interact with technology. ChatGPT, a GPT-3 language model variant, is designed to mimic human conversational style and was widely introduced in 2021 (Shidiq, 2023). With 175 billion parameters, the model is based on the Transformer architecture first introduced in 2017. ChatGPT has attracted the attention of the media and technology industries because of his extraordinary abilities. With high accuracy, this tool can translate between languages and produce coherent document summaries (Munawar et al., 2023). In addition, ChatGPT is the basis for a chatbot that can communicate with users and respond to questions. Despite its recognized capabilities, ChatGPT's popularity has also raised controversy and concerns regarding the impact of AI in natural language delivery.

The interaction between users and GPT Chat creates exciting dynamics in using natural language technology. Users can initiate interactions by providing questions or instructions to the generative language model, engaging natural language processing to understand context. GPT Chat responds by providing answers or information, including detailed explanations or problem solutions (Misnawati, 2023). The uniqueness of this model lies in its ability to retain the context of previous conversations, giving the impression of limited understanding and memory. In each interaction, there is an element of personality or unique style in GPT Chat responses to create a more enjoyable communication experience. However, remember that this model has limited awareness regarding context, so users can provide clarification so that answers are more accurate. Human-machine interaction, or Human-Computer Interaction (HCI), includes all forms of involvement between humans and computer technology. It involves interface design, development systems, and other aspects facilitating effective communication between humans and machines. Good interface design seeks to create an intuitive, efficient, and satisfying user experience, considering ease of use, quick response, and suitability to needs. Thus, technological developments open new opportunities to increase efficiency, creativity, and user satisfaction in human-machine communication (Arnya et al., 2023).

According to research by Annisa & Pratama (2022) entitled "Implementation of the Human & Computer Interaction Paradigm in the Era of Society 5.0: Systematic Literature Review," this is related to its impact. A literature review was conducted, and it was found that implementing human-computer interaction covers several areas. Of the 17 papers analyzed, not all articles explain in detail the use of human-computer interaction and its impact in various fields. Several journals note variations of human-computer interaction that can be applied in multiple applications, including health, education, social media, and even in the context of games.

Even though there are variations in these applications, the analysis shows similarities in application development in several countries. Developed countries focus on implementing human-computer interaction in the Education and Health sectors, often using robots or artificial intelligence. On the other hand, developing countries tend to create human-computer exchanges for industrial purposes to increase profits for users and service providers. The rapid development of artificial intelligence technology, especially ChatGPT, drives the need for an in-depth understanding of the factors that influence the acceptance and use of these technologies. This research comprehensively analyzes the impact of Perceived Ease of Use, Social Influence, and Facilitating Conditions on the use of ChatGPT. According to a study revealed by Misnawati (2023) with the title *ChatGPT: Benefits, Risks, and Wise Use in the Era of Artificial Intelligence*, Perceived Ease of Use in the context of ChatGPT includes the extent to which users feel interacting with ChatGPT is a simple task and can be done quickly. These factors may influence a user's propensity to adopt and use this technology. Social influence, which can come from various sources such as friends, family, colleagues, or digital influencers, is also an important factor in using ChatGPT.

Meanwhile, according to research by Firat (2023) entitled *How Can GPT Chat Transform Autodidactic Experiences and Open Education*, support or recommendations from the social environment can increase user motivation to adopt this technology. Facilitating Conditions explores resource availability, technical support, and accessibility in ChatGPT use.

These factors can be critical in increasing user comfort in using this technology. User experience was generally positive with GPT Chat, supported by coherent responses and ease of use. Despite these limitations, efforts continue to be made to improve the quality of the user experience. Interaction Efficiency, the main focus of this research, is the extent to which users can interact with ChatGPT efficiently. Aspects such as speed of response, ease of navigation According to previous research by Faiz & Kurniawaty (2023) with the title *Challenges of Using ChatGPT in Education Viewed from a Moral Point of View*, we see that interaction with ChatGPT is a form of communication with machines. The emotional impact can vary depending on the user's perception and expectations. Although ChatGPT can provide human-like responses, it is important to remember that it is just a computer program without personal feelings or experiences. It is important to understand that while ChatGPT can present information and respond to questions well, it cannot provide the emotional support that it can provide to humans. Therefore, interactions with ChatGPT should be considered as a tool for obtaining information, not as a substitute for a sincere and passionate relationship.

The significance of this study lies in its contribution to comprehending the adoption of artificial intelligence technologies, particularly ChatGPT. Through the involvement of 100 respondents utilizing the Purposive Sampling method, this research offers insights into the UTAUT concept, as previously explored by Handayani & Sudiana (2017) in their study titled "Analysis of the Application of the UTAUT (Unified Theory of Acceptance and Use of Technology) Model to User Behavior." UTAUT is an Information System model designed to elucidate user behavior concerning information technology. The primary goal of research utilizing UTAUT is to assist organizations in understanding how usage responds to introducing new technology variables such as Perceived Ease of Use, Facilitating Conditions, social influencers, and User Experience, all of which contribute to Interaction Efficiency and Emotional Impact. These discoveries provide a foundation for further advancements in comprehending the factors influencing the future application of artificial intelligence technology.

Theoretical Framework

1. Unified Theory of Technology Acceptance and Use (UTAUT)

UTAUT, or Unified Theory of Acceptance and Use of Technology, is a theoretical framework created by Venkatesh, Morris, Davis, and Davis in 2003 (Sedana & Wijaya, 2012). Integrating aspects of several previous technology acceptance theories, UTAUT is designed to provide a comprehensive understanding of behavior. Use of technology. Some of the primary constructs in UTAUT involve assessing ease of use, social influence, conditions that facilitate use, and actual user actions in using technology. Through UTAUT, research can identify critical factors influencing technology acceptance and service, providing valuable guidance for organizations and technology designers to increase user adoption of technology.

1) Perceived Ease of Use

Perceived Ease of Use, or perceived ease of use, refers to the extent to which users perceive that a technology or system can be used easily without requiring extraordinary effort or skills (Handayani & Sudiana, 2017). In the context of this research regarding the use of ChatGPT, this variable covers the extent to which users feel that interacting with ChatGPT is a simple task and can be done quickly. The higher the Perceived Ease of Use level, the more likely the user will accept and use ChatGPT.

H1: Perceived Ease of Use has a positive effect on User Experience when using GPT Chat

Perceived Ease of Use, or perceived ease of use, positively influences User Experience in using GPT Chat. Analysis of the data in this study can provide insight into the extent to which users feel that GPT Chat is easy to use and how this perception relates to various aspects of the user experience. If the research results support this hypothesis, it could serve as a basis for developing more intuitive interfaces and other strategies to increase the ease of use of GPT Chat, thereby improving the overall user experience.

2) Social Influence

Social Influence can come from various sources, such as friends, family, coworkers, or digital influencers (Sedana & Wijaya, 2012). If someone feels that their use of ChatGPT is supported or encouraged by their social environment, they may be more motivated to adopt this technology. In other words, Social Influence reflects how external social factors shape user attitudes and behavior toward using ChatGPT.

H2: Social Influence positively affects User Experience when using GPT Chat.

Social Influence has a positive impact on User Experience when using GPT Chat. This means that social pressure or Influence from other people, such as friends, family, or social groups, can increase the

enjoyment, satisfaction, and effectiveness of interacting with GPT Chat (Prasetyo & Anubhakti, 2011). Data analysis to test this hypothesis involved gathering information about how users felt influenced by others in their use of GPT Chat and how this correlated with perceived user experience. If the findings support this hypothesis, it could indicate that social factors have a positive role in improving User Experience, providing insight to consider better strategies for leveraging social Influence to increase user adoption and experience with Chat GPT.

3) Facilitating Conditions

Facilitating Conditions in UTAUT include external factors that influence an individual's readiness to use technology. These include organizational support, technology accessibility, user technical capabilities, external support, and regulations. Positive perceptions of these conditions can increase technology adoption, while constraints can become obstacles.

H3: Facilitating Conditions have a positive effect on User Experience when using GPT Chat
Facilitating Conditions positively influence actual use (User Experience) in the context of using Chat GPT. This suggests that favorable conditions, such as organizational support and technological accessibility, motivate individuals to actively use GPT Chat in daily interactions. Data analysis can test the significant contribution of these factors to the actual use of Chat GPT. If the findings support this hypothesis, it will provide insight into the factors that facilitate the adoption and use of Chat GPT technology.

2. User Experience

User Experience (UX) can be explained by four fundamental elements: value, adaptability, desirability, and usability, as simplified by Frank Guo (2019). The customer rule principle, which emphasizes the importance of giving control to users in determining their level of satisfaction, is the primary basis for building a positive user experience. Therefore, the success of a feature in a product, system, or service will be more effective in improving UX if it can fulfill these principles and provide perceived value, good adaptability, attractive appeal, and optimal usability for users.

H4: User Experience positively affects Interaction Efficiency when using GPT Chat.

User Experience has a positive influence on Interaction Efficiency when using GPT Chat. This means user satisfaction, comfort, and effectiveness of interacting with GPT Chat positively influence interaction efficiency. If User Experience increases, the efficiency of user interaction with GPT Chat also tends to increase. Data analysis can validate these relationships, providing insights to improve GPT Chat design and implementation

3. (Human-Computer Interaction- HCI)

Adopting responsive design, touch screens, and the latest technologies, such as virtual and augmented reality, are the latest trends. HCI is evolving from technical aspects to a holistic approach considering human-computer interaction's psychological, emotional, and social factors (Thuillard et al., 2022). Collaboration between computer scientists, designers, and psychologists is crucial in developing more user-friendly technology.

1) Interaction Efficiency and Emotional Impact

Interaction Efficiency refers to the extent to which users can achieve their goals quickly and efficiently when interacting with a system. This involves the time required, the number of steps, and the error rate. Efficient systems provide a better user experience. On the other hand, Emotional Impact reflects the emotional impact of users during and after interaction with a product or service. Feelings of satisfaction, joy, or disappointment can influence a user's overall perception.

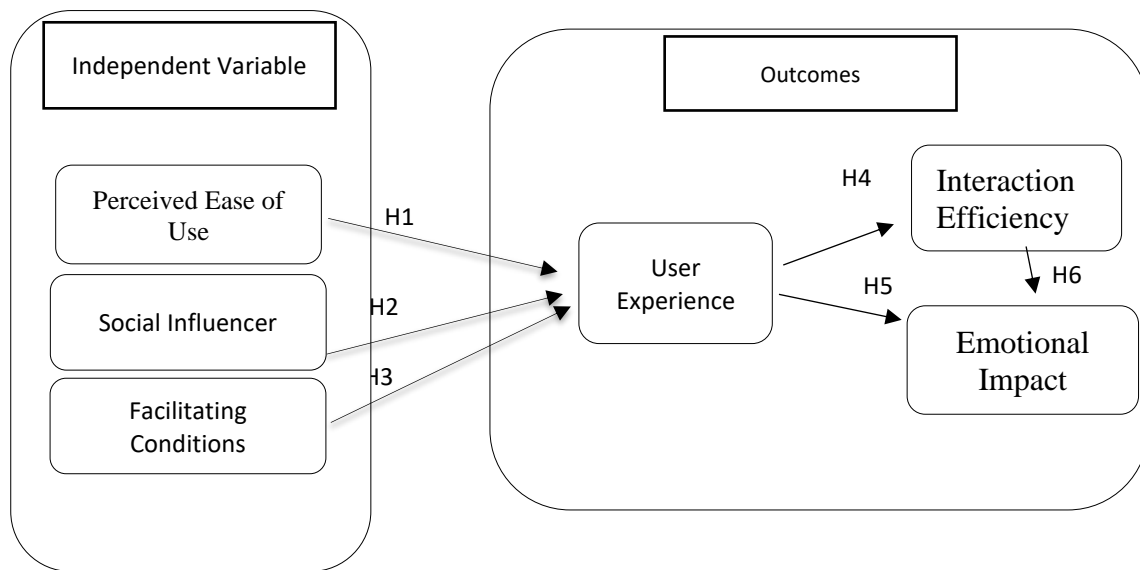


Figure 1. Conceptual Framework
Source: Private Document

Material and Methodology

This research uses a quantitative approach with a Causal Research design to test the cause-and-effect relationship between variables such as Perceived Ease of Use, Social Influencer, Facilitating Conditions, User Experience, Interaction Efficiency, Emotional Impact, in the use of Chat GPT among Indonesian society. The research population was Chat GPT users in Indonesia, with primary data collected from 100 respondents via a Likert scale questionnaire. The purposive sampling method was used to select respondents, and the data collected will be analyzed using SmartPLS4 software. This software can explain the relationships between variables and carry out the analyzes needed to confirm theories and identify relationships between latent variables in this research (Sugiyono, 2013).

Questionnaire Design

The importance of variable operationalization lies in converting abstract concepts, such as attitudes, into concrete measures using Likert scales. Detailing variables into indicators helps create precise and relevant measurement instruments, ensuring more accurate and meaningful research results.

Table 1. Operasional Variabel

Variable	Indicator	Measurement
Perceived Ease of Use	Using GPT chat is very easy and understandable..	Ordinal
	You can access GPT chat on a PC or smartphone	
	I feel comfortable and easy to explore the various features and functions offered by Chat GPT.	
	found it easy to understand and follow the instructions, without any obstacles	

	I feel that the features offered are in accordance with the user's goals,	
Social Influence	Friends around me have had positive experiences with using Chat GPT for searching information	Ordinal
	I use GPT Chat because I am influenced by social media content	
	I feel confident in the quality of Chat GPT and the good reviews and comments about using Chat GPT.	
	Using GPT Chat increases my chances of saving time on searches	
Facilitating Conditions	I have complete control over the use of the Chat GPT	Ordinal
	I can access the devices or technology needed to run GPT chat on my cellphone.	
	Using GPT Chat on a cellphone is more accessible to operate according to the circumstances.	
	Chat GPT can manage and store my data history that other devices can access.	
	Chat GPT is easily accessible through a diverse range of mobile devices	
User Experience	All the information answered by Chatgpt can help answer my questions.	Ordinal
	Using GPT Chat rarely experiences network or server problems.	
	Chat GPT is presented clearly and without advertising, making me comfortable using the Chat GPT	
	I can easily find all the information answers using Chat GPT	
Interaction Efficiency	Am I satisfied with the efficiency of interactions when using Chat GPT	Ordinal
	I feel like I get information quickly using Chat GPT?	
	I feel that Chat GPT meets my needs efficiently when searching for information?	
	I find it very effective to use GPT Chat in providing satisfying responses during interactions	
Emotional Impact	I feel satisfied if I always use Chat GPT to find answers to my questions	Ordinal
	I feel there are special moments that leave a positive emotional impression when interacting with Chat GPT	
	I believe that the use of GPT Chat has had a good impact	
	I feel very satisfied getting a quick answer after interacting with Chat GPT	

Result and Discussion

1. Result

Dari total 100 responden yang berpartisipasi dalam penelitian dengan mengisi kuesioner mengenai penggunaan Chat GPT, berikut adalah gambaran mengenai karakteristik responden.

Table 2. Respondent Characteristics

Percentage	Frequency	Characteristics
Gender		
Woman	45	45%
Man	55	55%
Age		
15– 20 Years	34	34%
21 – 25 Years	25	25%
26 – 30 Years	20	20%
31 – 35 Years	14	14%
>36 Years	7	7%
Last education		
middle/high school	20	20%
Diploma (D1-D3)	17	17%
Bachelor degree)	54	54%
Master (S2)	9	9%
Profession		
Student/Students	17	17%
Doesn't work	9	9%
Entrepreneur/Entrepreneur	19	19%
Government/BUMN employees	33	33%
Private employees	22	22%
Your current type of residence		
Kos	18	18%
Family house	56	56%
My own house	26	26%
Using GPT Chat		
No	0	0%
Yes	100	100%
GPT Chat User Status		
I am a Chat GPT (Premium) user	32	32%
I am a GPT Chat user (Free)	68	68%

The analysis results from Table 1, which includes the characteristics of respondents, show that most respondents are male, covering 55% of the total respondents. The 15-20 year age group is the

largest age group with a percentage of 34%. Most respondents had completed higher education, predominantly undergraduate level, which reached 54%. In the context of work, most respondents work as government or BUMN employees, and around 33% live in the family home, 56%. Furthermore, about 68% of respondents are free Chat GPT users, and 32% are premium users.

Apart from demographic characteristics, researchers also paid attention to respondents' behavior regarding the use of GPT Chat. The following are the results of the analysis regarding this behavior.

Table 3. Respondent Behavior

Respondent Behavior	Frequency	Percentage
Know GPT Chat?		
Family/Friends	20	20%
Teacher	17	17%
Print media	5	5%
Social media	58	58%
Television News	0%	0%
Experience Using GPT Chat		
< 6 months	15	15%
One year	20	20%
>1 year	33	33%
> 2 years	32	32%
Frequency of use of the GPT Chat service in one month		
Rarely (5-10 days a month)	12	12%
Medium (11-20 days a month)	22	22%
Frequently (20-30 days a month)	66	66%
Frequently asked GPT Chat questions		
Job assignment information	15	15%
School/college assignment information	32	32%
Reference information for creative ideas	13	13%
Translate	10	10%
Paraphrase	25	25%
Counting numbers	5	5%
Would you ever recommend Chat GPT to others?		
No	14	14%
Yes	86	86%

The data from the table reflects that the majority of respondents, 58%, gained knowledge about Chat GPT through social media platforms. As many as 33% of respondents had experience using Chat GPT for 1-2 years. Most users, around 66%, use Chat GPT 30 times a month. Regarding questions, 32% tend to use information from college or school assignments, and the second position namely 25%. Furthermore, around 86% of users recommend Chat GPT.

Variable Description Analysis

The results of the data for each research indicator can be seen from the response values given by respondents to each of the following variable indicators (Abdillah & Jogiyanto, 2015).

Table 4. Reflective Variable Description

Reflective Variable Description			
Dimension	Indicator Mean	Category	Indicator
Perceived Ease of Use 4,154 (Very good)	PEU1	4,17	Very good
	PEU2	4,15	Very good
	PEU3	4,19	Very good
	PEU4	4,13	Very good
	PEU5	4,15	Very good
Social Influence 4,152 (Very good)	S1	4,15	Very good
	S2	4,13	Very good
	S3	4,18	Very good
	S4	4,15	Very good
Facilitating Conditions 4,214 (Very good)	F1	4,18	Very good
	F2	4,15	Very good
	F3	4,2	Very good
	F4	4,32	Very good
	F5	4,22	Very good
User Experience 4,15 (Very good)	U1	4,18	Very good
	U2	4,08	Very good
	U3	4,24	Very good
	U4	4,12	Very good
Interaction Efficiency 4,155 (Very good)	IE1	4,12	Very good
	IE2	4,15	Very good
	IE3	4,22	Very good
	IE4	4,13	Very good
Emotional Impact 4,072 (Very good)	EI1	3,95	Very good
	EI2	3,97	Very good
	EI3	4,22	Very good
	EI4	4,15	Very good

Analysis Outer Model

In the measurement model analysis, the criteria applied include validity tests such as Convergent Validity and Discriminant Validity and reliability tests based on Composite Reliability. Convergent Validity is assessed through the correlation between estimated item scores (factor loading) to ensure that indicators related to the same variable have a significant correlation. The results of the Convergent Validity analysis provide insight into the extent to which the hands describe the research variables well and are closely related to each other (Abdillah & Jogiyanto, 2015).

Table 5. Validity Test

Uji Validitas				
	Indicator	Factor Loading	Composite reliability (rho_c)	Average variance

				extracted (AVE)
Interaction Efficiency	IE1	0,870	0,898	0,67
	IE2	0,837		
	IE3	0,744		
	IE4	0,865		
Facilitating Conditions	F1	0,774	0,887	0,617
	F2	0,795		
	F3	0,779		
	F4	0,786		
	F5	0,791		
Emotional Impact	EI1	0,862	0,877	0,645
	EI2	0,824		
	EI3	0,755		
	EI4	0,763		
Perceived Ease of Use	PEU1	0,787	0,883	0,6
	PEU2	0,799		
	PEU3	0,744		
	PEU4	0,751		
	PEU5	0,791		
Social Influence	S1	0,815	0,88	0,698
	S2	0,814		
	S3	0,785		
	S4	0,855		
User Experience	U1	0,794	0,857	0,598
	U2	0,747		
	U3	0,776		
	U4	0,774		

All indicators in this study were valid based on the results of Convergent Validity testing for The study demonstrates Convergent Validity with loading factors above 0.70 for each indicator and AVE values exceeding 0.5 for each variable. This confirms the reliability of the measurements. Additionally, the Composite Reliability (CR) values surpassing 0.7 indicate the study's reliability. Discriminant Validity, assessed through the Heterotrait-Monotrait (HTMT) method, further supports the validity of the measurements.

Tabel 6 Discriminant Test (HTMT)

Note: EI; Emotional Impact, IE= Interaction Efficiency, FC=Facilitating Condition, PEU= Perceived Ease of Use, SI=Sosial Influencce, UE=User Experience

The HTMT (Heterotrait-Monotrait Ratio) analysis reveals favorable discriminant validity between Emotional Impact (EI) and other variables. The low heterotrait ratios (e.g., 0.403 with Interaction Efficiency) indicate that EI differs significantly from other variables in the model. This underscores the good discriminant validity of the Emotional Impact variable, indicating it is not highly correlated with other variables. This distinction is crucial in PLS-SEM analysis, as each variable effectively measures a distinct concept (Sarwono & Narimawati, 2015).

Table 7. R-Square Value

R square		
	R-square	R-square adjusted
Emotional Impact	0.193	0.177
Interaction Efficiency	0.067	0.056
User Experience	0.204	0.179

Based on the table above, the r-square value of the Interaction Efficiency variable is 6.7%, the r-square value of Impact is 19.7%, value of the User variable is 20.1%. From the results of this determination, it can be concluded that the influence of the Perceived Ease of Use variable and the UTAT Model on User Experience is 17.9%, the influence of User Experience on Interaction Efficiency is 5.6%, and the influence of Interaction Efficiency on Emotional Impact, is 17.7%.

	1	2	3	4	5	6
EI						
IE	0.403					
FC	0.607	0.433				
PEU	0.216	0.209	0.446			
SI	0.427	0.275	0.468	0.291		
UE	0.435	0.280	0.461	0.387	0.349	

Emotional Impact and the r-square Experience is 20.1%. From the determination, it that the influence Ease of Use on the UTAT Model is 17.9%, the Experience on Interaction Efficiency is 5.6%, and the influence of Interaction Efficiency

PLS Predict

The study employs Structural Equation Modeling (SEM) with Partial Least Squares (PLS) for statistical data processing (Ghozali, 2006). The findings reveal that user satisfaction is influenced by system quality, information quality, and service quality. In terms of predictive ability, the PLS-SEM_RMSE value, compared to the Latent Variable Model (LM) value, is smaller according to Table 9 PLS Predict. This indicates effective prediction of each question item representing the variables in the study, demonstrating the model's satisfactory predictive ability for the investigated variables..

Table 9. PLS Predict

PLS Predict						
	Q ² predict	PLS-SEM_RMSE	PLS-SEM_MAE	LM_RMSE	LM_MAE	PLS-SEM_RMSE - LM_RMSE
EI 1	0.057	0.925	0.727	0.935	0.745	-0,01
EI 2	0.076	0.991	0.793	1.033	0.816	-0,041
EI 3	0.093	0.725	0.621	0.727	0.591	0
EI 4	0.067	0.894	0.757	0.938	0.763	-0,044
IE 1	0.046	0.870	0.685	0.861	0.697	0,013
IE 2	0.041	0.904	0.701	0.993	0.796	-0,037
IE 3	0.043	0.793	0.661	0.847	0.697	-0,047
IE 4	0.035	0.804	0.634	0.853	0.721	-0,05
UE1	0.085	0.831	0.656	0.933	0.717	-0,101
UE2	0.077	0.864	0.689	0.956	0.747	-0,087
UE3	0.084	0.775	0.653	0.867	0.705	-0,087
UE4	0.066	0.851	0.727	0.935	0.783	-0,089

F-Square Evaluation (F2)

In research, the F-Square value is used to determine the magnitude of the influence of exogenous variables on endogenous variables. Evaluation of the value (F2) based on the following scale: (Abdilah dan Jogyanto 2015).

- The (F2) value of 0.02 – 0.14 is categorized as a weak influence of exogenous variables at the structural level.
- The (F2) value of 0.15 – 0.34 is categorized as a moderate influence of exogenous variables at the structural level.
- A (F2) value of > 0.35 is categorized as a strong influence of exogenous variables at the structural level

Table 10. F-Square Results

F Square		
Path Coefficient	F Value	Effect Size
IE-> EI	0.087	Weak

FC -> UE	0.056	Weak
PEU-> UE	0.042	Weak
SI -> UE	0.025	Weak
UE -> EI	0.091	Weak
UE -> IE	0.069	Weak

Based on the F-Square results presented in Table 10, it is evident that the influences between variables exhibit predominantly weak effects. The F-square values for various relationships, such as Interaction Efficiency on Emotional Impact, Facilitating Conditions, Perceived Ease of Use, Social Influence on User Experience, and User Experience on Interaction Efficiency, all fall within the category of weak influence. These findings are consistent with Aji Kusuma's 2023 research, which categorizes values between 0.02 and 0.14 as indicating a weak influence of exogenous variables at the structural level. The prevalence of weak values in the current study suggests a pattern of relatively low impact between the variables.

Hypothesis test

In hypothesis testing, evaluating the significance of the relationship between variables in the structural model is crucial. The bootstrapping procedure provides a method to obtain significance values. The significance of a hypothesis can be gauged by examining the parameter coefficients and T-statistic values in the bootstrapping results report. To ascertain significance, we compare the T-count value (T-statistic) with the T value in the T-table at a given alpha level, typically set at 0.1 (10%). The summary of our statistical estimation results is outlined as follows:

Table 11. Hypothesis Testing

Uji Hipotesis						
Path Coefficients	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Decision
IE-> EI	0.278	0.281	0.129	2.176	0.027	Accepted
FC -> UE	0.242	0.255	0.091	2.684	0.007	Accepted
PEU -> UE	0.204	0.223	0.087	2.373	0.016	Accepted
SI -> UE	0.151	0.163	0.093	1.653	0.097	Rejected
UE -> EI	0.284	0.286	0.102	2.725	0.006	Accepted
UE -> IE	0.255	0.283	0.107	2.321	0.021	Accepted

In summary, the study yielded positive outcomes for five hypotheses, affirming that Interaction Efficiency, Facilitating Conditions, Perceived Ease of Use, User Experience, and User Experience (specifically concerning Interaction Efficiency) all exhibit significant positive effects, as evidenced by their respective T-statistics and p-values. However, the hypothesis associated with Social Influence was rejected, indicating that it does not exert a significant influence on User Experience.

2. Discussion

Interaction Efficiency and Emotional Impact:

The research indicates a positive relationship (STDEV=0.129, $t=2.1786$, $p=0.028$) between Interaction Efficiency and Emotional Impact in GPT Chat. This suggests that users perceive the GPT Chat service as essential, contributing to overall satisfaction and a positive emotional experience. Aligns with prior research (Alavi et al., 2016) emphasizing the importance of interaction efficiency in information-seeking behavior and its correlation with both usage intention and emotional impact.

Facilitating Conditions and User Experience in Chat GPT:

Contrary to expectations, the hypothesis is rejected (STDEV=0.091, $t=2.684$, $p=0.007$), indicating that users are still evaluating whether they have complete control over usage, data, and easy access to Chat GPT. Facilitating conditions refer to the belief in the organizational and technical infrastructure supporting system use and were found to influence use behavior, although not directly impacting behavioral intention.

Perceived Ease of Use and User Experience in Chat GPT:

The hypothesis is rejected (STDEV=0.087, $t=2.331$, $p=0.016$), suggesting that users are assessing whether Chat GPT provides good answer information and meets their needs. Perceived Ease of Use is crucial for user experience, and the findings highlight users' expectations regarding the quality of information provided by Chat GPT.

Social Influence and User Experience in Chat GPT:

The hypothesis is affirmed (STDEV=0.093, $t=1.653$, $p=0.097$), indicating that users did not perceive positive experiences, advertising, or Chat GPT quality, deeming them lacking in discount offers. Social influence, defined as the extent to which influential people in their circle believe they should adopt the new system, was considered irrelevant based on the author's conclusions.

User Experience and Emotional Impact in Chat GPT:

The hypothesis is accepted (STDEV=0.102, $t=2.725$, $p=0.006$), suggesting that users feel that all the information and content presented in Chat GPT meets their needs and has a positive emotional impact. This underscores the importance of a positive user experience in shaping emotional responses and overall satisfaction.

User Experience and Interaction Efficiency in Chat GPT:

The hypothesis is accepted (STDEV=0.107, $t=2.321$, $p=0.027$), indicating that users believe Chat GPT's information aligns with their needs, positively impacting efficiency. Users' perceptions of information quality and its relevance to their needs contribute to a favorable assessment of interaction efficiency.

Research Implications

The research reveals a strong positive correlation between Interaction Efficiency and Emotional Impact in Chat GPT usage. Respondents expressed satisfaction, perceiving that Chat GPT effectively met their needs and provided high-quality information, contributing to a mean value of 4.155 in Interaction Efficiency.

User Experience significantly influenced Interaction Efficiency, indicating respondents found all information in Chat GPT aligned with their needs, resulting in a mean value of 4.15. Indicator U3, with a mean value of 4.24, highlighted respondents' comfort with Chat GPT due to clear and ad-free content presentation.

Perceived Ease of Use positively impacted User Experience, with Indicator PEU 3 having the highest mean value of 4.19. This suggests respondents found Chat GPT more effective for monitoring electricity use compared to conventional methods.

However, Social Influence did not exhibit a significant influence, indicating that positive user experiences, advertising, and perceptions of Chat GPT quality did not impact respondents' usage. The definition of Social Influence, related to the degree of belief in adopting a new system, did not align with the research context.

Conclusion

This study employed the SEM-PLS method, revealing results from five variables: Perceived Ease of Use, Facilitating Conditions, User Experience, Interaction Efficiency, and Emotional Impact. These variables were found to have a positive and significant impact on user experience, Interaction Efficiency, and Emotional Impact. Conversely, the variable of social influence did not exhibit a positive and significant influence on user experience.

Based on the research findings, companies can take note of the significance of Perceived Ease of Use, Facilitating Conditions, and User Experience as crucial factors in enhancing Interaction Efficiency and Emotional Impact when utilizing Chat GPT. These factors can be integrated into the company's strategy to foster product and service innovations aligned with current digital advancements.

Reference

- Abdillah, W., & Jogiyanto. (2015). *Partial Least Square (PLS) Alternatif Structural Equation Modeling (SEM) dalam Penelitian Bisnis*. CV Andi Offset.
- Annisa, L. H., & Pratama, Y. H. C. (2022). Implementasi Paradigma Interaksi Manusia & Komputer Pada di Era Society 5.0: Systematic Literature Review. *Technology and Informatics Insight Journal*, 1(2), 66–74. <https://doi.org/10.32639/tij.v1i2.183>
- Ardaya, M., Ohorella, N. R., Prihantoro, E., & Wahyu, Tri. (2023). Aplikasi Jaki sebagai Media Pengaduan Sarana Umum di Kelurahan Jatinegara. *Jurnal Badati Ilmu Sosial & Humaniora*, 8(1).
- Faiz, A., & Kurniawaty, I. (2023). Tantangan Penggunaan ChatGPT dalam Pendidikan Ditinjau dari Sudut Pandang Moral. *EDUKATIF : JURNAL ILMU PENDIDIKAN*, 5(1), 456–463. <https://doi.org/10.31004/edukatif.v5i1.4779>
- Firat, M. (2023). *How Chat GPT Can Transform Autodidactic Experiences and Open Education?*
- Ghozali, I. (2006). *Structural Equation Modeling, Metode Alternatif dengan Partial Least Square*. Badan Penerbit Universitas Diponegoro.
- Handayani, T., & Sudiana, S. (2017). ANALISIS PENERAPAN MODEL UTAUT (UNIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY) TERHADAP PERILAKU PENGGUNA SISTEM INFORMASI (STUDI KASUS: SISTEM INFORMASI AKADEMIK PADA STTNAS YOGYAKARTA). *Angkasa: Jurnal Ilmiah Bidang Teknologi*, 7(2), 165. <https://doi.org/10.28989/angkasa.v7i2.159>
- Misnawati, M. (2023). ChatGPT: Keuntungan, Risiko, Dan Penggunaan Bijak Dalam Era Kecerdasan Buatan. *PROSIDING SEMINAR NASIONAL PENDIDIKAN, BAHASA, SASTRA, SENI, DAN BUDAYA*, 2(1), 54–67. <https://doi.org/10.55606/mateandrau.v2i1.221>
- Prasetyo, H. B., & Anubhakti, D. (2011). Kajian Penerimaan Sistem E-Learning Dengan Menggunakan Pendekatan UTAUT Studi kasus Fakultas Teknologi Informasi Universitas Budi Luhur. *Jurnal BIT*, 8(2), 45–47.

- Sarwono, J., & Narimawati, U. (2015). *Membuat Skripsi, Tesis, dan Disertasi dengan Partial Least Square*. CV Andi Offset.
- Sedana, I. G. N., & Wijaya, St. W. (2012). PENERAPAN MODEL UTAUT UNTUK MEMAHAMI PENERIMAAN DAN PENGGUNAAN LEARNING MANAGEMENT SYSTEM STUDI KASUS: EXPERENTIAL E-LEARNING OF SANATA DHARMA UNIVERSITY. *Jurnal Sistem Informasi*, 5(2), 114. <https://doi.org/10.21609/jsi.v5i2.271>
- Shidiq, M. (2023). The Use of Artificial Intelligence-Based Chat-GPT and Its Challenges for the World of Education: From the Viewpoint of the Development of Creative Writing Skills. *Proceedings of the International Conference on Education, Society, and Humanity*, 353–357.
- Sugiyono. (2013). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Thuillard, S., Adams, M., Jelmini, G., Schmutz, S., Sonderegger, A., & Sauer, J. (2022). When humans and computers induce social stress through negative feedback: Effects on performance and subjective state. *Computers in Human Behavior*, 133, 107270. <https://doi.org/10.1016/j.chb.2022.107270>
- Munawar, Z., Herru Soerjono, Novianti Indah Putri, Hernawati, & Andina Dwijayanti. (2023). Manfaat Kecerdasan Buatan ChatGPT Untuk Membantu Penulisan Ilmiah. *TEMATIK*, 10(1), 54–60. <https://doi.org/10.38204/tematik.v10i1.1291>