

KNOWLEDGE, ATTITUDE AND USE OF CHATGPT SERVICES AMONG UNDERGRADUATES OF UNIVERSITY OF NIGERIA, NSUKKA

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Abstract

The coming of the innovative ChatGPT has the potential to stifle the process of student's capacity to be original in their work and think critically to birth innovative ideas. Therefore, this study seeks to examine the knowledge, attitude and use of chat Generator Pre-trained Transformer (ChatGPT) among undergraduates of University of Nigeria, Nsukka. This study is based on the uses and gratification theory, utilizing a survey research design and questionnaire as the instrument. The population for this study is 35,130, the total number of students for 2023/2024 academic session, according to the Academic Planning Unit, UNN. The Australian online calculator was used to select the sample size of 380 respondents. Data was analyzed using descriptive statistics with the aid of SPSS. Result shows that knowledge of ChatGPT among students is below the acceptable threshold of the mean value, while the level of attitude and use is high. The study recommends that UNN students should be properly guided on the use and benefits of ChatGPT in research and other academic activities. The school management and lecturers should educate them on how to ethically apply this innovation in their study.

Keywords: Knowledge, Attitude, Use, ChatGPT, Undergraduates

Introduction

ChatGPT has the capability to revolutionize communication especially journalism by helping in some of its tasks include; news aggregation, data-driven journalism, fact-checking and social managing media platforms. Open AI developed ChatGPT, a linguistic incline model (chatbot) that enables naturally human-computer interaction. According to Valova, Mladenova, and Kanev (2024), a chatbot is an application that allows a human and a computer or machine to have a conversation via text messages or text-to-speech. In natural language, these computer programs can converse with users, comprehend their intentions, and react according to pre-established rules and information. Chatbots are designed to convincingly

mimic human behavior as a discussion partner, although they usually need to be turned and tested frequently (Valova, Mladenova, & Kanev, 2024).

ChatGPT are advanced computer programs built to mimic human conversation, offering automated support to consumers in the business world. The system is also capable of handling large number of requests simultaneously and generates immediate responses. This has minimized customers waiting time and increases customer satisfaction in the business sphere. These chatbots comprehend customer queries and provide conversational responses to their requests by utilizing artificial intelligence techniques such as machine learning and natural language processing (NLP) (Geroge & Geroge, 2023). By offering round-the-clock assistance, they reduce the need for human intervention while accelerating responses times. Although, ChatGPT is still new and evolving, maybe the inventors might rethink the negative impact on students learning and inbuilt control mechanism, before then, how have the students perceived ChatGPT, especially regards knowledge, attitude and practices in Nigeria, it is against this backdrop that this study intends to assess the knowledge, attitude and practices of ChatGPT services among undergraduates of University of Nigeria Nsukka (UNN).

Statement of the Problem

Students are expected to be original in their works while they think critically in the process and possibly birth creative output. But this is eroding with the coming of the innovative ChatGPT this has the potential to stifle the process of students' capacity to be original in their work, think critically to birth innovative ideas. The education field will never remain the same with this innovation, especially as it concerns student work quality and their capacity to be critical thinkers.

However, some ethical issues—more specifically, issues with plagiarism—are associated with the employment of AI technologies in education. What will motivate the students to voice their ideas and positions if they have access to comparable tools as the lecturer? Indeed, these AI technologies provide a quicker and simpler way to write on a certain subject or to complete a number of jobs or issues. Students often overdo their assignments, which prevents them from developing the habit of writing and ethically expressing their ideas. They often fail to reason and seek out an explanation for the problems they are required to answer; in other words, they fail to give them any thought. They can use the copy-and-paste features to obtain their desired result without even reading the conditions of the assignment or tasks. This is detrimental to the future of the students in the work environment where they are expected to think critically and birth solution to prevailing challenges.

Objective of the study

The main object of this study is to assess the knowledge, attitude and practices of ChatGPT services among undergraduates of UNN. The specific objectives of this study are to:

1. Determine the level of knowledge of ChatGPT among undergraduates of UNN
2. Ascertain the most applied version of ChatGPT among UNN undergraduates.
3. Examine the attitude of UNN undergraduates towards ChatGPT
4. Assess the practice of ChatGPT among UNN undergraduates.

Literature Review

These study focus on the knowledge, attitude and practices towards chat GPT services among undergraduates of University of Nigeria, Nsukka. In order to accomplish this, the researcher reviewed some already existing relevant research on practices towards chat GPT services. Research on Teachers' Attitudes Towards Using Chat GPT was conducted by Nayab Iqbal, Hassaan Ahmed, and Kaukab Abid Azhar (2023), "International Journal of Management and Administrative Sciences" With the ability to communicate with students in real-time through machine learning and natural language processing (NLP) algorithms, ChatGPT has the potential to completely transform education by offering students interactive, individualized learning experiences that are catered to their unique requirements. This study examines faculty members' perceptions regarding ChatGPT use using the Technology Acceptance Model. Twenty faculty members from a private institution in Pakistan participated in semi-structured interviews. According to the interview responses, those university faculty members use ChaGPT with a usually cautious attitude. The faculty members' attitudes and perceptions of ChatGPT were unfavorable. The results of this study indicate that university faculty need more information and education about ChatGPT in order to make informed decisions about its use. There were significant concerns raised about potential risks like plagiarism and cheating, as well as potential benefits like ease of lesson planning and assessment. Additionally, future studies should also concentrate on how students perceive ChatGPT and employ quantitative techniques to understand more about how university faculty use it for teaching and learning purposes.

There is evidence that Chat GPT and Wolfram Alpha also face the problem of giving wrong answers. Therefore, to prevent users from being misled by incorrect answers, we must program corrected knowledge into Chat GPT and Wolfram Alpha. Programming the Future Knowledge Peter Chew Correction for Sine Rule into the Education 4.0 Calculator, the device is enabled to deliver accurate answers. This proves that, with future knowledge, Peter Chew Correction for Sine Rule can correct errors in Chat GPT and Wolfam Alpha. This can effectively spark students' interest in using technology for learning mathematics especially in future scenarios similar to the Covid-19 crisis.

Justin Paul, Akiko Ueno, Charles Dennis (2023) reported on International Journal of Consumer Studies Volume 47. The current priority is to promote research on innovative and novel topics. In this context, this article discusses multifaceted benefits and potential challenges of using artificial intelligence-based chat Generative Pre-trained Transformer (ChatGPT), while presenting various future research directions in consumer studies and marketing. Since its inception in late 2022, ChatGPT has created a great deal of discussion about its features, advantages, and potential drawbacks. ChatGPT offers algorithm-generated conversational responses to text-based prompts. On the one hand, ChatGPT can provide better customer service, shopping, personalization, and increased client engagement. Cost-effectiveness, social interaction and communication techniques, consumer behavior data, and enhanced marketing efforts. However, there are some potential drawbacks, such as worries about consumer welfare, bias and false information, a lack of context, privacy issues, ethical issues, and security. The article ends by suggesting a possible research agenda for ChatGPT and consumer studies. All things considered, this article offers insightful information about

the advantages and difficulties of ChatGPT, revealing its possible uses and the need for more research.

Farida H. S, Babby H, and Andre H. L. (2023), conducted a study on the impact of Chat GPT Usage on Learning Motivation among Scout Students Chat GPT is an artificial intelligence technology that uses user questions to generate a chat-based response. Numerous fields, including education, benefit greatly from this potent technology. Artificial intelligence (AI) may be used by students to help them discover. The impact of students' use of ChatGPT on their motivation to learn was discussed in this paper. A total of 500 students who participate in a scout community in Medan, Indonesia, provided responses to the survey. Utilizing a quantitative methodology, the study distributed questionnaires and conducted a survey to gather information from the participants. With modest adjustments, they employed earlier research tools to characterize the variables. The findings indicate that when it comes to utilization, male students outnumber female students. Remarkably, younger students use Chat GPT more frequently than older students do.

The study also found out that using Chat GPT significantly and positively impact students' learning motivation. An investigation into medical students' opinions regarding the use of chatbots and artificial intelligence in medicine was carried out by German in 2023. The study used a combination of qualitative analysis of group discussions and standardized quantitative questionnaires. The study, which involved 12 medical students, found that although students had some reservations about using AI, such as data security, their overall attitudes toward its use were positive. In order to find out how teachers felt about using chatbots in the teaching and learning process, Bii and his colleagues Peter S. (2023) carried out a study in Kenya. The sample consisted of ten teachers from public boarding schools for girls and boys, and the study used a quasi-experimental methodology. The results showed that teachers have favorable opinions about integrating chatbots into the classroom. Similarly, Shanqeeti (2023) studied instructors' perceptions toward the use of interactive chatbots in teaching students with special needs in the Kingdom of Saudi Arabia (KSA) using descriptive research. 150 teachers (103 men and 48 women) made up the study sample. The results showed that instructors' views and usage of interactive chatbots in teaching special education pupils were moderate, and they encountered moderate difficulties when doing so Jordan (2023) studied medical students' perceptions on AI and machine learning through a descriptive study. A standardized questionnaire was used to gather data from 900 medical students across six universities. The descriptive analysis showed that most of the students agreed that AI is important in medicine and that learning about it will help one's career in medicine. Additionally, a comprehensive review was carried out to investigate the views of healthcare students about AI. 38 studies from the Web of Science, PubMed, Embase, and Scopus databases are included in the study. According to the analysis's findings, healthcare students' opinions on artificial intelligence in the medical field were favorable.

Based on the above literature, there is a pressing need to investigate students' attitudes towards Utilizing ChatGPT in education. Therefore, this study aims to address the gap in the literature regarding attitudes toward ChatGPT as a learning tool across diverse academic disciplines.

Theoretical Framework

This study is anchored on the Uses and Gratification theory, because it helps to explore the motivations behind why individuals elect specific media and how they utilize it to satisfy their needs. In the context of ChatGPT services, the theory helps to explain why undergraduates at the University of Nigeria Nsukka engage with ChatGPT and the gratifications they derive from it.

The UGT emerged in the 1950s (Blumler (1979)), then researchers indulged in studies concerned with the mass media campaign effect. It is one of the most important theories that scholars employ to comprehend how people use media (Malik *et. al*, 2016). According to Chen *et al.* (2023), the concept was first put forth in the 1940s. At the time, studies believed that the influence of mass media would be the same for all of its audiences. But audiences are seen as active by UGT, not passive (Katz *et. al*, 1973). The UGT therefore suggests that the impact will vary depending on the individual. Every new media has its origins, and UGT may be used to understand why people use it.

The UGT focuses on the reasons behind using a specific medium as well as the variables around those reasons. It also suggests that different people utilize the media for various purposes. Papacharissi & Rubin (2000) state that UGT has been used to a variety of internet-based technologies since the internet's inception. Studies have identified the motivations for using various social media platforms, including Facebook, Instagram, Tiktok, YouTube, and WhatsApp (Hossain, 2019; Menon, 2022; Alhabash & Ma, 2017).

Similarly, some studies use the Uses and Gratifications Theory (UGT) to explore the motivations behind using artificial intelligence applications. Research has examined the reasons for using AI-powered virtual in-home voice assistants like Alexa and Siri (Malodia *et al.* 2021; Mclean & Osei-Frimpong 2019). Despite ChatGPT's gaining popularity among learners, there is limited literature addressing their motivations for using it.

This study examines the different uses and gratifications of ChatGPT from the student's perspective. Expanding beyond traditional and new media, the study utilizes the UGT to AI-powered ChatGPT and identify and find specific gratifications. UGT further investigates the reason individuals select particular media and how they engage with it to meet their needs. In the context of ChatGPT services, the theory helps to explain why undergraduates at the University of Nigeria Nsukka engage with ChatGPT and the gratifications they derive from it.

Methodology

The survey research design was used. The entire population of the undergraduates in UNN as at 2022/2023 academic session was 35,130 (Academic planning unit UNN, 2023).

Table 1: Details of the Population of UNN Undergraduate Students (2022/2023)

Faculties	Number of male students	Number of female students	Total
Agriculture	787	2240	3027
Arts	1560	3673	5233
Biological sciences	2402	3299	5701
Education	972	3217	4189
Engineering	2820	337	3157
Pharmaceutical sciences	706	635	1341
Social sciences	2535	2656	5191
Veterinary Medicine	1559	2269	3828
Physical sciences	1699	1037	2736
Vocational and technical education	236	491	727
Total	15,276	19,854	35,130

Source: Academic Planning Unit, UNN, 2023

The sample size of 317 was used. This was derived using the Australian sample size calculator provided by the National Statistical Services (NSS) of Australia. The respondents were selected through the simple random sampling method. This sampling method is suitable because it requires a researcher to assure that all the members of the population are included in the list and then randomly select the desired number of subjects. The major instrument used for data collection in this study is the questionnaire which provides the primary source of data. The researcher made use of close-ended and open-ended questions, and the questionnaire was administered to the respondents who were technological knowledgeable and active users of social media, through the use of online questionnaire (Google Form). The study utilized both descriptive and quantitative explanations of data collected from the field. Statistical Package for Social Sciences (SPSS) software were used to aid the analysis.

Results

The data was presented and analyzed in the line with the objectives of the study. To achieve this, an online Questionnaire was shared within platforms mainly for UNN students and 317 students responded, hence this analysis is based on that.

Demographic Characteristics of Respondents

N=317

S/No	Item	Frequency	Percentage (%)
	Age		
1	18-22	151	47.6
2	23-27	92	29.1
3	28 and above	74	23.3
	Gender		
1	Male	128	40.5

2	Female	189	59.5
	Year of study		
1	Year 1	36	11.2
2	Year 2	78	24.4
3	Year 3	107	33.6
4	Year 4	96	30.8
	Faculty		
1	Agriculture	32	10.1
2	Arts	28	8.8
3	Biological sciences	31	9.8
4	Education	25	7.9
5	Engineering	46	14.5
6	Pharmaceutical sciences	26	8.2
7	Social sciences	46	14.5
8	Veterinary medicine	21	6.6
9	Vocational and technical education	42	13.2
10	Medical sciences	20	6.3

Table 1 above showed the demographic characteristics of the respondents. For age the category with the highest representation was ages 18-22 with 47.6%. Females with the highest representation of 59.5% while year 4 and above has the highest representation among the respondents. Social sciences and engineering faculties have the highest representation among the faculties.

Respondents' response to Objective 1

Table 2 the level of knowledge of chatGPT among undergraduates of UNN.

N=317

S/No	Items	SA	A	SD	D	X	Remark
1	I have heard of ChatGPT	89 (28.1)	90 (28.4)	65 (20.5)	73 (25.0)	2.4	Rejected
2	I have read articles or research work about ChatGPT	89 (28.1)	91 (28.7)	55 (17.4)	82 (25.8)	2.4	Rejected
3	I know how ChatGPT functions	62 (19.5)	85 (26.8)	90 (28.4)	80 (25.3)	2.5	Accepted
4	ChatGPT is correct by understanding to user queries	89 (28.1)	96 (30.2)	59 (18.6)	73 (23.1)	2.4	Rejected
5	ChatGPT is correct by responding to user queries	80 (25.2)	90 (28.3)	69 (21.7)	78 (24.8)	2.5	Accepted
6	There are legal considerations related to the use of ChatGPT	93 (29.3)	119 (37.5)	66 (20.8)	39 (12.4)	2.2	Rejected
	Total Mean					2.4	

SA = Strongly Agreed, A = Agreed, SD = Strongly Disagreed, D = Disagreed, X = Mean.

Table 2 contains respondent’s response on the first objective of the study, which is on level of knowledge towards ChatGPT among undergraduates of UNN. Among the six responses four was rejected based on the decision rule of the mean value of 2.5, while two were accepted. The overall mean is 2.4, this also confirms that statistically, questions on knowledge of ChatGPT among undergraduates in UNN are rejected based on the decision rule of the mean value. For the open-ended question on the personal knowledge of ChatGPT the students felt their knowledge is average based on the dynamic nature of AI.

Respondents’ response ton Objective 2

Table 3 the most applied version of ChatGPT among UNN undergraduates. N=317

S/No	Items	SA	A	SD	D	X	Remark
1	I use ChatGPT 3.5 legacy version	120 (37.8)	52 (16.5)	116 (36.5)	29 (9.2)	2.2	Rejected
2	I use default ChatGPT 3.5 version	126 (39.7)	40 (12.6)	119 (37.5)	32 (10.2)	2.2	Rejected
3	I use ChatGPT 4 version	71 (22.4)	138 (42.9)	89 (28.1)	21 (6.6)	2.2	Rejected
	Total Mean					2.2	

Table 3 showed the respondents’ response to research objective two which is on the most applied version of ChatGPT among UNN undergraduates. Based on the response, all the popular aversions of ChatGPT, ChatGPT 3.5 legacy, ChatGPT 3.5 version and ChatGPT 4 version are applied in UNN only the most popular seem to be ChatGPT 3.5 version based on the number of responses from the respondents. Although, the mean of three versions based on the decision rule of the mean are below the mean threshold of 2.5. This also applied to the total of the overall all responses based on the most popular version of the ChatGPT arc rejected. On the open questions on the reason for the versions been used by the respondents, the default version 3.5 is embraced by most undergraduates.

Respondents’ response to Objective 3

Table 4 the attitude of UNN undergraduates towards ChatGPT N = 317

S/No	Items	SA	A	SD	D	X	Remark
1	I feel comfortable using ChatGPT in my life as a student	92 (29.0)	98 (30.9)	102 (32.2)	25 (7.9)	2.2	Rejected
2	I trust ChatGPT to offer correct and beneficial information	76 (23.9)	113 (35.6)	83 (26.2)	45 (14.3)	2.3	Rejected
3	I feel comfortable relating with ChatGPT	89 (28.1)	77 (24.2)	67 (21.1)	84 (26.6)	2.5	Accepted
4	I think that ChatGPT can reduce the workload of studies	85 (26.8)	100 (31.5)	54 (17.1)	78 (24.6)	2.4	Rejected
5	ChatGPT is better than human interaction	100 (31.5)	79 (24.9)	85 (26.8)	53 (16.7)	2.3	Rejected

6	I can recommend ChatGPT to fellow student	98 (30.9)	105 (33.1)	59 (18.6)	55 (17.3)	2.2	Rejected
7	I think ChatGPT might replace human interaction in the tomorrow	69 (21.7)	79 (24.7)	109 (34.7)	60 (18.9)	2.5	Accepted
	Total Mean					2.3	

Table 4 above showed respondents' response to the various questions asked on attitude of UNN undergraduates' towards ChatGPT. Although, out of the seven questions asked, only two questions were accepted based on the decision rule of the mean of 2.5. The five questions rejected fell below the decision mean of 2.5. This applied to the total mean value, hence the responses on the attitude of UNN undergraduates towards ChatGPT are rejected. Although, based on the response of the open-ended question, on the general perception of UNN undergraduates on the usage of ChatGPT, more respondents are impressed by the general perception of UNN undergraduates and are optimistic the future holds more promise for undergraduates in UNN.

Respondents' response to Objective 4

Table 5: The practice of ChatGPT among UNN undergraduates N = 317

S/No	Items	SA	A	SD	D	X	Remark
1	I use ChatGPT for practicing and exam preparation	77 (24.3)	83 (26.2)	67 (21.1)	90 (28.3)	2.5	Accepted
2	I use ChatGPT to attained my study goal	89 (28.1)	67 (21.1)	93 (29.3)	68 (21.5)	2.5	Accepted
3	I use ChatGPT as a resource material in my study	99 (31.2)	119 (37.5)	29 (9.1)	70 (22.2)	2.2	Rejected
4	My learning process is easier because of ChatGPT	99 (31.2)	119 (37.5)	29 (9.1)	70 (22.2)	2.2	Rejected
5	I use ChatGPT to multi task	79 (24.7)	82 (25.8)	91 (28.7)	65 (20.5)	2.5	Accepted
6	I use ChatGPT frequently	76 (23.9)	102 (32.2)	89 (28.1)	50 (15.7)	2.4	Rejected
7	ChatGPT is easier to use	76 (23.9)	99 (31.5)	81 (25.7)	60 (18.9)	2.5	Accepted
8	Using ChatGPT is improving the quality of my writing	101 (31.9)	87 (27.5)	34 (10.7)	95 (29.9)	2.4	Rejected
	Total Mean					2.4	

Table 5 above showed respondents' response to the various questions asked on practice of ChatGPT among UNN undergraduates although, out of the eight questions asked, four questions were accepted and four rejected based on the decision mean of 2.5. This is same for the overall mean value. In response to the open-ended question on the healthiness of ChatGPT academically among undergraduates in UNN, More of the respondents agreed that the usage

of ChatGPT is healthy as it improves the quality and dept of student's study research thereby widens their knowledge base.

Discussion of Findings

The study found that, for age the category with the highest representation was ages 18-22 with 47.6%. Female with the highest representation of 59%, while year 4 and above have the highest representation among the respondents. Social sciences and engineering faculties have the highest representation among the faculties. Objective one of the study, the findings suggested that, the level of knowledge towards ChatGPT among undergraduates of UNN. Among the six responses, four question 1, 2, 4 and 6 were rejected based on the decision rule. This implies that, the level of the level of knowledge of ChatGPT among the students giving the dynamic nature of ChatGPT, but the level seems not sufficient to give an otherwise mean value based on the decision rule. On the open-ended question on the personal knowledge of ChatGPT the students felt their knowledge is average based on the dynamic nature of AI and its recent accessibility among undergraduates. The outcome of the study might not be unconnected to the percentage of respondent's response which is not sufficient to cause an otherwise mean values based on the decision rule. On objective two of the study the outcome suggested that, the most applied version of ChatGPT among UNN undergraduates seem to be ChatPT 3.5 version based on the number of responses from the respondents. Although, the mean of three versions based on the decision rule of the mean are below the mean threshold of 2.5. This outcome might be because of the free version of ChatGPT 3.5 this will give student easy access bearing in mind the financial status of students. On objective three, the result of the findings suggested that, although the attitude of UNN undergraduates' towards ChatGPT based on the respondents is below average based on respondents' response in respect to the mean values of the decision rule. However, more respondents are impressed by the general perception of UNN undergraduates' and are optimistic the future holds more promise for undergraduates in UNN. The reason for this outcome might be that usually technology takes time to gain wide acceptability even among the educated as skepticism is in the nature of man. On objective four of the study findings suggested that, the practice of ChatGPT among UNN undergraduates based on the respondent response showed that there is practices of ChatGPT among UNN undergraduates, practices which includes; resource material for study and examination preparation, multi task and improvement in writing. While more of the respondents agreed that the usage of ChatGPT is healthy as it improves the quality of student's study and research thereby widens their knowledge base. This finding might be that the students truly see the difference in their results especially as it concerns their grades.

Recommendation

Based on the study's findings, the following recommendations made;

- Undergraduates should be educated on the knowledge and its ethical ways of usage especially in research, this will enable undergraduates better apply this knowledge and their sources ethically.
- Undergraduates should be educated on the most effective version that offers better options for undergraduate especially as it concerns their study and how they can utilize these options for optimum result. Not all free things give maximum benefit.

- Every technology takes time to gain acceptability, hence the case of ChatGPT will not be entirely different, and with time the attitude of undergraduates will improve. But before then, undergraduates should understand the need to be cautious in embracing technology, it is better embraced with better understanding the usage and the downside.
- Undergraduates work including assignment should be subjected to plagiarism test, this will help checkmate poor usage of AI tools in writing good and ethically sound works by undergraduates.

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