CUSTOMER SERVICE PREFERENCE BETWEEN *MTN'S AI ZIGI* CHATBOT AND HUMAN REPRESENTATIVES AMONG OAU UNDERGRADUATES

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ABSTRACT

This study examined customer service preference between MTN's AI Zigi chatbot and human representatives among students of Obafemi Awolowo University (OAU). The study had the objectives of understanding the extent of awareness and frequency of usage of Zigi, identifying the preferred service option, and determining the factors influencing students' choices. The study adopted the diffusion of innovation and uses and gratifications theory as frameworks. This study made use of a quantitative research design and adopted non-probability sampling. The research methodology used was the survey method, while a questionnaire was employed as the instrument of data collection. This study's sample included 400 undergraduates of OAU. The data gathered were analysed and interpreted using descriptive statistics. The study found that while more than half of respondents were aware of Zigi, actual usage was low and frequency of use was minimal. Human representatives were the most preferred service option, especially for complex tasks such as lodging complaints and resolving technical issues, while Zigi was mostly used for simple tasks such as checking account balance or buying data. The study concludes that although Zigi offers advantages such as speed and 24/7 availability, human representatives remain the preferred choice for complex issues. The study recommended that implementing a hybrid service model that combines Zigi's 24/7 availability with seamless escalation to human agents for complex or sensitive issues and enhancing awareness through sensitization campaigns on platforms and channels popular with students.

Keywords: Customer service, MTN, AI, Zigi and Chatbox.

Introduction

The digital age has transformed customer communication, with Artificial Intelligence (AI) playing a crucial role. AI-powered chatbots, designed to simulate conversations with human users, have revolutionized business-customer interactions by offering real-time assistance and reducing operational cost. According to Joshi et al. (2019), AI chatbots are increasingly popular among businesses. The customer service journey has undergone complete digitization, spanning from initial contact to post-purchase support. Businesses have shifted from a product-centric approach to a customer-focused strategy, making customer experience a priority, with AI chatbots playing a key role in this transformation.

Customer service and experience are crucial factors in determining business success because they shape the customer's long-term perception of the brand and influence repeated purchases and brand loyalty. Customers develop lasting impressions based on their interactions with a company, influencing their future decisions and preferences. With the rise of digital transformation, companies are continuously seeking ways to enhance customer interactions through innovative technologies. McKinsey & Company (2022) reported that 70% of customers expect self-service options such as chatbots when interacting with e-commerce platforms.

Digitalization has become a key trend reshaping industries by enabling more flexible and customer-orientated services. This shift has led to increasing expectations from customers, who now demand seamless accessibility across multiple digital platforms (Hsu & Lin, 2022). To remain competitive, businesses must continuously adapt to technological advancements and enhance their service quality. AI-powered chatbots have emerged as a response to these evolving expectations, providing instant support and automating customer interactions.

The chatbot market has experienced significant growth, valued at $8.1 billion in 2022 and projected to reach $46.4 billion by 2026 (Sudlow-Poole, 2022). Businesses worldwide integrate chatbots into their customer service strategies to enhance efficiency, cut costs, and provide improved support. Studies suggest that many customers prefer chatbots for customer service due to their faster response times compared to traditional support methods that often involve long waiting periods (Brandtzaeg & Følstad, 2017).

Nigeria's telecommunications industry has witnessed tremendous growth and transformation over the past two decades, driven by technological advancements, increasing mobile penetration, and intense market competition. The Nigerian telecommunications sector was initially established by the British Colonial administration in 1886, which was later taken over and controlled by the state-owned Nigeria Telecommunications Limited (NITEL). The telecommunications sector was liberalized in 1999, leading to the emergence of private operators like MTN, Airtel, Glo, and 9mobile. The major shift in the industry in May 1999 led to the increase in demand for mobile telecommunications services.

The entry of new players into the market gave consumers more choices, enabling them to compare service quality, tariffs, and other offerings, leading to frequent switching between mobile networks. The telecommunications sector has embraced AI to enhance customer service. Nigeria's telecommunications industry has grown significantly, driven by an increasing number of mobile phone users and internet penetration. The Nigerian Communications Commission (NCC), Nigeria

had over 157 million mobile subscribers as of October 2024, making it the largest telecommunications market in Africa. This growth has intensified competition among service providers like MTN, Airtel, Glo, and 9mobile, each striving to deliver superior customer service.

MTN Nigeria, recognizing this shift, introduced the Zigi chatbot in 2020 to improve service delivery, streamline customer interactions, and enhance customer experience. Zigi handles a range of customer enquiries, from basic account information to complex technical issues. According to Kar (2023), chatbots enhance operational efficiency by automating repetitive customer service tasks and providing 24/7 support. AI chatbots are now implemented as an additional and alternative means of customer service within companies, as they allow customers to seek assistance at any time.

The transition to digital customer service began with basic automation, such as online ordering and electronic customer support. As technology advanced, customer interactions became more complex and efficient, enabling businesses to provide more seamless and personalized experiences. AI-powered chatbots, such as MTN Nigeria's Zigi, represent a key milestone in this transformation, offering 24/7 automated support and streamlining communication.

Obafemi Awolowo University students, as tech-savvy youths, frequently interact with both AI and human support, making them an ideal group to study the effectiveness of Zigi. Their experiences will provide insights into whether AI-powered customer service can truly replace or complement human interactions. A key question is whether students believe that Zigi meets their needs as effectively as human representatives or if there are gaps in chatbot performance that require human intervention, and it aims to establish their preference between both media.

By understanding these preferences, the study aimed to provide practical insights for telecommunications providers seeking to optimize AI-driven customer service while ensuring that user expectations and experiences remain a priority.

Research Questions

1. To what extent are Obafemi Awolowo University students aware of or exposed to MTN's Zigi chatbot?
2. How frequently do Obafemi Awolowo University students use MTN Zigi chatbot for customer service?
3. What is the preferred customer service option among Obafemi Awolowo University students between the Zigi chatbot and human representatives?
4. What factors influence students' preference between MTN's Zigi chatbot and human customer service representatives?

Conceptual Review

Customer Service

The term "customer service" encompasses activities aimed at improving customer satisfaction by ensuring products or services meet expectations. Lovelock and Wirtz (2016) define it as the interaction between providers and customers before, during, and after purchase. In telecommunications, customer service includes support through call centres, physical offices,

digital platforms, and AI systems like chatbots, covering billing, complaints, product education, technical support, and post-purchase assistance.

Historically, customer service was personal and localized. In pre-industrial times, transactions occurred face-to-face in community markets and workshops, relying on trust and reputation rather than formal systems. The Industrial Revolution introduced more formalized service with return policies and standardized customer desks in department stores. The post-World War II boom brought mass consumerism and urbanisation, prompting structured customer support departments for complaint handling, warranty claims, and enquiries. Telephone support, including toll-free lines and IVR systems, became widespread, helping reduce labour costs (Gonzalez, 2018).

The internet's rise in the 1990s transformed service delivery. Email enabled asynchronous communication and documentation, while Customer Relationship Management (CRM) systems centralised customer data for personalised service. Live chat and self-service platforms allowed customers to manage accounts and payments online.

The 2010s saw mobile internet and social media reshape customer expectations. Customers increasingly engaged with brands on platforms like Twitter and Facebook, demanding faster and more transparent responses. Over 30% preferred social media support over traditional channels (Nielsen, 2014). Telecoms introduced mobile apps for SIM registration, airtime recharge, data tracking, and complaint resolution, with companies like AT&T, Orange, and MTN leading this shift.

Today, AI-driven automation and conversational agents are central to customer service. Chatbots, powered by machine learning and natural language processing, deliver real-time, scalable support across platforms (Adamopoulou & Moussiades, 2020). Notable telecom examples include Vodafone's TOBi, Orange's Djingo, and MTN's Zigi, all providing high-volume, personalised customer interactions.

Influence of Customer Service on Brand Perception

In the telecommunications industry, customer service functions as a critical touchpoint that shapes how customers perceive and evaluate a brand. Recent research underscores that brand equity is largely influenced by the consistency and effectiveness of service encounters. Rehman and Al-Debei (2023), found that components of brand equity significantly affect consumer decisions in mobile telecom services, particularly in highly competitive markets. As telecom providers adopt both human representatives and AI-driven systems like chatbots, the quality of these interactions becomes central to brand perception.

Moreover, Casaló, Flavián, and Ibáñez-Sánchez (2022) identify responsiveness, reliability, and ease of use as key dimensions of e-service quality that directly impact customer satisfaction and emotional engagement. When digital service platforms such as chatbots deliver poor responses, fail to resolve complaints, or appear impersonal, customers may perceive the brand as unreliable or indifferent. Conversely, prompt and empathetic responses, whether from AI or human agents, reinforce brand credibility and encourage loyalty. These findings highlight that customer service quality is not only a functional necessity but also a strategic determinant of how customers emotionally connect with and evaluate telecom brands.

Artificial Intelligence

The term Artificial Intelligence (AI) originates from the fusion of two concepts: artificial, meaning human-made or synthetic, and intelligence, referring to the ability to acquire and apply knowledge and skills. Etymologically, the word "intelligence" is derived from the Latin *intelligentia* or *intelligere*, meaning "to understand" or "to perceive" (Harper, 2021). AI aims to create systems capable of performing tasks that would typically require human intelligence.

Russell and Norvig (2020) define AI as the study of agents that process precepts and respond accordingly. Kaplan and Haenlein (2019) describe AI as the ability to interpret data, learn from it, and adapt flexibly to achieve goals. Artificial Intelligence (AI) refers to systems designed to perform tasks that typically require human intelligence.

The term, introduced by John McCarthy in 1956, encompasses fields like machine learning, robotics, and natural language processing (NLP). AI systems learn from data, interpret information, and adapt to achieve goals (Kaplan & Haenlein, 2019). Unlike rule-based systems, they improve over time through experience, making them valuable in areas such as healthcare, finance, education, and customer service. Chatbots, for example, use AI to simulate human conversation and assist users efficiently (Bock et al., 2020). As AI continues to evolve, its impact on society and business grows (Rust, 2020).

Classification of Artificial Intelligence

AI can be classified by its level of intelligence into three categories: Artificial Narrow Intelligence (ANI), Artificial General Intelligence (AGI), and Artificial Superintelligence (ASI) (Narkhede, 2021).

Artificial Narrow Intelligence (ANI): ANI, also known as Weak AI, refers to systems designed to perform specific tasks without general cognitive abilities. These systems operate within set parameters and cannot function beyond their programming (Huang & Rust, 2018). ANI simulates human cognition but lacks genuine understanding. Examples include digital assistants such as Siri and Alexa, and recommendation engines (Narkhede, 2021). It is the most widely implemented form of AI, with applications in sectors such as healthcare, marketing, and security (Huang, Rust, & Maksimovic, 2019).

Artificial General Intelligence (AGI): AGI, or Strong AI, refers to systems capable of human-like reasoning and adaptability across various domains (Wirth, 2018). Unlike ANI, AGI could learn and apply knowledge in multiple contexts. While it remains theoretical, research in deep learning and neural networks continues to explore this goal. AGI systems are expected to exhibit self-awareness and human-level cognition (Huang & Rust, 2021). Early optimism about Strong AI in the 1950s and 1960s diminished as researchers encountered the complexity of replicating human thought (Huang & Rust, 2018).

Artificial Superintelligence (ASI): ASI refers to a hypothetical stage where AI surpasses human intelligence in all areas, including creativity and emotional understanding (Huang & Rust, 2018). Though speculative, ASI raises important ethical and philosophical concerns. Scholars such as Stephen Hawking have highlighted its potential risks to humanity (Wirth, 2018).

Artificial Intelligence in Customer Service

AI has transformed traditional customer service models in various innovative ways that improve interaction quality, responsiveness, and operational efficiency.

Chatbots: Chatbots are among the most prominent AI applications in customer service. These software agents simulate human conversation using NLP and ML to provide instant responses to customer queries. Chatbots can handle high volumes of repetitive questions, offer product recommendations, troubleshoot issues, and direct customers to the appropriate resources (Adamopoulou & Moussiades, 2020). Leading examples include Facebook Messenger bots, banking bots, and website-integrated virtual agents.

Virtual Assistants: Unlike simple chatbots, AI-driven virtual assistants such as Amazon's Alexa, Apple's Siri, or Google Assistant offer more complex interactions. They are capable of voice recognition, context-aware responses, task execution, and integration with multiple services (Hoy, 2018). In customer service, they assist with booking services, managing accounts, and even resolving technical issues.

Intelligent Call Routing: AI systems enhance call centre operations by analysing caller data and directing the call to the most suitable agent based on expertise, availability, and past interactions. This reduces wait time, increases first-contact resolution rates, and boosts overall customer satisfaction (Nguyen & Sidorova, 2018).

Self-Service Portals: AI also powers self-service platforms where customers can access knowledge bases, video tutorials, and interactive troubleshooting guides. These portals leverage recommendation engines and NLP to provide contextual information, reducing the dependency on human agents (Gentsch, 2019).

Chatbots

A chatbot is an AI-powered program designed to simulate human conversation through text or voice. It uses natural language processing (NLP) and machine learning (ML) to understand inputs, generate relevant responses, and improve over time (Huang et al., 2020;). The term "chatbot" combines "chat" and "robot," reflecting its purpose of automating conversational tasks (Li & Mao, 2015).

Modern examples include ChatGPT, Amazon Alexa, and Google Assistant. Chatbots serve various functions, from entertainment to business support, with growing use in customer service to reduce response time and improve efficiency (Chattaraman et al., 2019). Gartner (2016) predicted their dominance in customer interactions by 2020, and they are now valued for providing 24/7 support and enhancing user satisfaction (Haan, 2018).

There are two main types: NLP-based chatbots that enable more natural, human-like conversations, and rule-based bots offering predefined multiple-choice responses (Karen, 2021). Many systems integrate both to enhance reliability and user experience.

With increasing internet and social media use, chatbots have become vital tools in customer support, marketing, and technical assistance (Smutny & Schreiberova, 2020). However, as they

handle sensitive user data, ensuring secure and ethical information exchange is essential for their sustainable adoption (Li & Mao, 2015).

Functions of Chatbots in Telecommunications Customer Service

AI chatbots are increasingly being used as frontline tools for digital customer engagement. Their role has evolved from answering basic queries to managing complex service tasks, supporting both operational efficiency and customer satisfaction (Adamopoulou and Moussiades, 2020).

Query Resolution and Informational Support: Chatbots provide instant responses to customer queries, such as explaining product features or sharing service updates. Trained on internal knowledge bases, they reduce reliance on human agents. For example, MTN Nigeria's Zigi handles enquiries about data plans, airtime, and promotions. Salesforce (2022) reports that 64 percent of global customers use chatbots to access accurate information quickly. Compared to traditional search or phone-based systems, chatbots improve accessibility through dialogue, reducing customer effort (Kumar et al., 2020).

Transactional Assistance: Many chatbots are connected to enterprise systems, enabling them to perform tasks such as bill payments, SIM activations, complaint logging, and profile updates In Nigeria, chatbots like UBA's Leo and GTBank's Habari allow customers to complete transactions on messaging platforms like WhatsApp and Facebook Messenger. **Personalised Recommendations:** By using machine learning and analytics, chatbots can tailor interactions based on customer profiles and past behaviour. They suggest data plans, send reminders, and adjust communication styles. This supports relationship marketing and has been linked to improved conversion rates. Some chatbots also use sentiment analysis to escalate negative interactions to human agents when needed **Complaint Resolution:** Chatbots can manage simple complaint processes, including categorising issues, processing refunds, and routing complex cases. Although they may not handle emotionally sensitive complaints independently, they help reduce response time and abandonment rates (Lu et al., 2021). Transparent escalation to human agents helps maintain trust when chatbot functionality reaches its limits. **Feedback Collection:** After interactions, chatbots can gather feedback through ratings or Net Promoter Scores. These insights support ongoing service improvement and can highlight recurring issues for further action. **Customer Acquisition:** Chatbots play a role in marketing by engaging website visitors, qualifying leads, and referring potential customers to sales teams. When linked to Customer Relationship Management systems, they help segment audiences and initiate targeted outreach (Davenport et al., 2022). In telecoms and fintech, chatbot-led interactions can increase engagement duration by up to 35 percent.

Advantages of Chatbots in Telecommunications Customer Service

AI chatbots offer several benefits that contribute to improved customer service delivery, including faster support, lower costs, and greater consistency.

Speed and Availability: Chatbots operate continuously, providing instant responses at any time. This aligns with customer expectations, as 70 percent of users now demand real-time support from brands. In Nigeria, MTN's Zigi ensures 24-hour service through platforms such as WhatsApp and Telegram, enhancing service reliability (Ogunleye et al., 2023). **Cost Efficiency:** Automated systems help reduce operational costs by minimising the need for

large customer support teams. McKinsey (2022) notes that organisations using AI chatbots have achieved cost reductions of up to 40 percent. Chatbots allow human agents to focus on complex tasks, improving resource use and productivity (Accenture, 2023). Vodafone, for instance, reduced call volume by 15 percent with an 80 percent resolution accuracy rate. **Consistency:** Unlike human agents, chatbots deliver uniform service. This is particularly important in regulated industries such as finance and telecommunications, where incorrect information can lead to legal or reputational consequences. Chatbots follow predefined scripts and comply with data handling policies. **Personalisation:** Chatbots can recognise returning users, recall previous interactions, and customise recommendations. This level of personalised service increases customer satisfaction and loyalty, with 43 percent of consumers preferring brands that communicate based on individual needs.

Multilingual and Cross-Platform Support: In a multilingual country like Nigeria, chatbots that support English, Pidgin, and local languages help to improve inclusivity. While full support for indigenous languages remains limited, partial language switching improves usability. Chatbots also operate across websites, mobile apps, WhatsApp, Telegram, and USSD, ensuring consistency across platforms.

MTN's Zigi Chatbot

MTN Nigeria's Zigi is a comprehensive AI chatbot designed to handle a broad range of customer queries, from data subscriptions to airtime recharge. Launched in 2019 as part of MTN's digital transformation strategy, Zigi aims to enhance customer experience and optimise operational efficiency (Adepetun, 2022).

One of Zigi's distinguishing features is its linguistic adaptability. Unlike many global bots trained solely in English, Zigi is programmed to handle Nigerian Pidgin English, significantly enhancing usability for urban and rural populations alike. MTN reported that within the first year of deployment, Zigi handled over 2 million interactions, with a resolution accuracy of 85% for Tier-1 queries (MTN Group, 2021).

Zigi operates on a hybrid architecture combining proprietary conversational design with third-party natural language processing components. It uses a sophisticated intent recognition system capable of identifying over 120 distinct inquiry types with an accuracy of approximately 87% (Olatunji et al., 2022). The chatbot utilises rule-based logic for structured queries and machine learning for complex natural language inputs. It is accessible via multiple channels, including:

WhatsApp Business API

Facebook Messenger

MTN's mobile application

Web widget on MTN's official website

SMS interface for feature phone users

This multi-channel presence enables Zigi to serve a diverse customer base across varying device capabilities and connectivity levels, maintaining conversational context across platforms to allow seamless interactions.

Empirical Review

Shumanov and Nakamura (2021) conducted a cross-cultural study titled *"Customer Adoption of AI Chatbots in Telecommunications: A Cross-Cultural Study of Usage in Japan and the United States."* This quantitative research surveyed 600 telecom users from Japan and the U.S. to assess awareness, perception, and readiness to adopt AI chatbots. The study found that 80% of U.S. respondents had interacted with AI chatbots, compared to only 54% in Japan. Awareness significantly influenced adoption, with those exposed to chatbot advertising or peer discussions being 67% more likely to use them. The study found that younger adults (18–35) were the most aware demographic, aligning closely with university students. The research suggested that telecom providers' efforts to market and educate users about chatbot capabilities were key drivers of adoption.

Ciechanowski et al. (2019) investigated user satisfaction with human versus chatbot interactions. Their experimental study revealed that users preferred human agents for emotionally charged or complex scenarios, but chatbots were favoured for routine transactions. Similarly, Ashfaq et al. (2020) found that while chatbots were seen as convenient, users still preferred human agents for nuanced issues due to the bots' inability to demonstrate empathy or adapt to subtle cues. Luxton (2022) further explored the emotional dynamics of human versus chatbot interactions, finding that users disengaged from chatbots when they failed to grasp contextual nuances or lacked emotional intelligence.

Brandtzaeg and Følstad's (2017) study "Why People Use Chatbots: An Exploratory Study" identified key reasons for chatbot usage, such as seeking quick answers, avoiding wait times, and curiosity about AI. Their study found that chatbot usage was highest in-service sectors like banking and telecommunications, with customers preferring chatbots for simple tasks like data balance enquiries and troubleshooting. Gnewuch et al. (2018) further explored chatbot usage in telecom, revealing that customers aged 18–29 used chatbots most frequently for account enquiries, plan upgrades, and complaints. The study also highlighted the importance of user interface design and escalation options in enhancing chatbot engagement.

One key study, titled "Awareness, Adoption and Perception of WhatsApp Customer Service Chatbots in the Banking Sector: Perspectives from Undergraduate Students in Lagos, Nigeria" (Ben-Enukora, Ejem, Adeyeye, Ikunle, & Maduadichie, 2023), provides direct relevance to this research focus by its on Nigerian students. This cross-sectional survey involved 362 undergraduate students from three tertiary institutions in Lagos state. The findings indicated inadequate awareness and little usage of WhatsApp chatbot services among the surveyed population. Furthermore, there was a widespread negative perception of WhatsApp chatbots as a viable alternative to traditional customer service delivery. This negative perception was underscored by a low perceived usefulness of chatbots (less than 50%) in reducing stress and time associated with visiting banking halls. However, on a positive note, the study found that perceived satisfaction with the chatbots' performance in solving customer inquiries was above average (>50%). Based on these results, the authors recommended substantial public awareness campaigns and incentives to motivate customers to use virtual customer support options. This study highlights a significant gap in awareness and a prevalent negative perception, even when satisfaction with performance for resolved inquiries is noted.

Theoretical Review

Diffusion of Innovation (DOI) Theory

The Diffusion of Innovation (DOI) Theory, introduced by Everett M. Rogers in 1962, is a widely used framework for understanding how new technologies, ideas, and behaviours are adopted within a social system. It provides a structured approach to examining the adoption lifecycle of innovations, covering the processes, decision-making dynamics, and social influences that determine whether an innovation is accepted or rejected by individuals and organizations. DOI theory defines diffusion as "the process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 2003). This definition highlights four central elements: the innovation itself, the communication channels through which it spreads, the time taken for adoption, and the social system in which it occurs. Each element interacts in complex ways to influence the success or failure of adoption. An innovation refers to any idea, practice, or object perceived as new by individuals or organisations. The perception of newness, rather than actual novelty, is what triggers diffusion. For example, although AI chatbots are widely used globally, they may still be perceived as new in certain regions of Nigeria or by specific customer segments.

Diffusion of Innovation Theory is central to this study because it explains how AI-powered chatbots, such as MTN Nigeria's Zigi, are adopted by both users and organisations. DOI Theory provides a framework for understanding variations in customer adoption patterns, which is central to this research. It facilitates segmentation of telecom customers based on their readiness to engage with AI systems, ranging from innovators and early adopters (tech-savvy customers who embrace chatbots) to the late majority and laggards (those who prefer human interaction).

Uses and Gratifications Theory (UGT)

The Uses and Gratifications Theory (UGT) emerged in the mid-20th century as a shift from traditional media effects theories that viewed audiences as passive recipients of messages. UGT posits that media users are active agents who select media and communication technologies to fulfil specific psychological and social needs. The theory was developed through the works of Katz, Blumler, and Gurevitch in 1973, who argued that audiences are goal-oriented in their consumption patterns and seek content that serves individual gratifications.

Early applications of UGT focused on mass media such as newspapers, radio, and television, with motivations ranging from information-seeking and entertainment to social interaction and escapism. Over time, the theory has evolved to include new communication technologies, including the internet, mobile apps, and, more recently, AI-driven tools such as chatbots. **Core**

The relevance of the Uses and Gratifications Theory (UGT) to this study lies in its capacity to explain students' intentional use of MTN's Zigi chatbot as a means of satisfying specific service-related needs. UGT positions users as active agents who make deliberate choices based on the gratifications they seek, whether functional, emotional, or social. This perspective is particularly pertinent for university students at Obafemi Awolowo University, who often juggle academic, financial, and digital demands, and are therefore likely to priorities service options that offer autonomy, efficiency, and speed.

Study Methodology

According to Saunders, Lewis, and Thornhill (2016), a research method is a planned and organized strategy for conducting research, providing the roadmap for gathering reliable and valid data that supports the research objectives. This study adopts a quantitative research design, employing the survey method to systematically gather numerical data and examine patterns and preferences among respondents. The population of this study comprises all the registered full-time undergraduate students across all the campuses. This population of study used was based on the most recent official data from the Obafemi Awolowo University's official website (2024) and was estimated to be 32,480 across the campus' thirteen (13) faculties. For this study, a multi-stage sampling technique was employed. Using the Taro Yamane formula, the sample size for this study was pegged at 395 respondents but was rounded up to 400 respondents.

Results

Table 1: Demographic Characteristics of Respondents

Variable	Categories	Frequency	Percentage
Age	16-18	58	14.5%
	19-21	142	35.5%
	22-24	149	37.3%
	25-27	32	8%
	Above 27	19	4.7%
	Total	**400**	**100%**
Gender	Male	133	33.3%
	Female	267	67.7%
	Total	**400**	**100%**
Level of Study	100 Level	70	17.5%

	200 Level	81	20.3%
	300 Level	80	20%
	400 Level	131	32.7%
	500 Level and above	38	9.5%
	Total	**400**	**100%**

In terms of age distribution, the majority of respondents were within the 22–24 age range, accounting for 37.3% of the total. This was closely followed by students aged 19–21, who made up 35.5%. Respondents aged 16–18 represented 14.5%, while those between 25–27 made up 8%. Only 4.7% of the participants were above 27 years of age. Regarding gender, a larger proportion of respondents were female, making up 67.7% of the total sample, while male respondents accounted for 33.3%.

Faculty representation was varied, with the Faculty of Social Sciences contributing the highest number of respondents (27.5%), followed by the Faculty of Science (25.3%) and the Faculty of Arts (11%). Other faculties included Education (10.3%), Technology (10%), Administration (5.5%), Law (5.2%), Clinical Sciences (2.7%), and Agriculture (2.5%). It is important to state that the research instrument (questionnaire) was open to all departments under the above-named faculties. For academic level, most respondents were in 400 Level, representing 32.7% of the sample. Students in 200 Level made up 20.3%, while those in 300 Level were 20%. First-year students (100 Level) accounted for 17.5%, and those in 500 Level and above made up 9.5%.

RQ1: To what extent are Obafemi Awolowo University students aware of and exposed to MTN's Zigi chatbot?

Table 2: Respondent's awareness of MTN Zigi Chatbot before survey

Variable	Frequency	Percentage
Yes	269	67.3%
No	131	32.7%
Total	**400**	**100%**

This shows the level of awareness Obafemi Awolowo University students had about MTN's Zigi chatbot before participating in the survey.

RQ2: How frequently do Obafemi Awolowo University students use MTN Zigi chatbot for customer service?

Table 3: Respondent's usage of MTN Zigi Chatbot for Customer Service

Variables	Frequency	Percentage
Yes	162	40.5%
No	238	59.5%
Total	**400**	**100%**

The table shows how many respondents have used MTN's Zigi chatbot for customer service. 162 respondents (40.5%) said they have used Zigi for customer service, while 238 respondents (59.5%) said they have not used it for customer service.

Table 4: Respondents' frequency of use of Zigi for Customer Service

Variables	Frequency	Percentage
Very frequently (at least once a week)	15	3.8%
Occasionally (once or twice a month)	46	11.5%
Rarely (a few times ever)	120	30%
Never	219	54.8%
Total	**400**	**100%**

The table shows how frequently respondents use MTN's Zigi chatbot for customer service. A large number of students, 219 (54.8%), said they have never used Zigi at all.

RQ3: What is the preferred customer service option among Obafemi Awolowo University students between the Zigi chatbot and human representatives?

Table 5: Customer Service option Preference and Reason among Respondents

Customer Service Option	Frequency	Percentage

Zigi Chatbot	64	16%
Human Representatives	219	54.8%
No preference	117	29.2%
Total	**400**	**100%**
Reason for preferred option		
Faster Response	113	28.2%
More accurate/helpful	146	36.5%
Easier to use	76	19%
More personal	111	27.8%
No preference	122	30.5%
Others	5	1.3%

The table shows that most respondents, 219 (54.8%), preferred human representatives, while 64 (16%) chose the Zigi chatbot and 117 (29.2%) had no preference. This shows that over half of the students still prefer human customer service agents rather than use the Zigi chatbot. For reasons behind their preference, the most common was more accurate/helpful, chosen by 146 (36.5%).

RQ4: What factors influence students' preference between MTN's Zigi chatbot and human customer service representatives?

Table 6: Factors Influencing Respondents choice for Customer Service between Chatbots and Human Representatives

Factors	Not Important	Slightly Important	Moderately Important	Important	Very Important	Total
Response Speed	51 (12.7%)	40 (10%)	79 (19.7%)	84 (21%)	146 (36.6%)	400 (100%)

Accuracy of Answer	43 (10.7%)	47 (11.8%)	83 (20.7%)	74 (18.5%)	153 (38.3%)	400 (100%)
Trust and Security	46 (11.5%)	55 (13.7%)	98 (24.5%)	77 (19.3%)	124 (31%)	400 (100%)
Ease of Use	47 (11.8%)	29 (7.3%)	91 (22.7%)	103 (25.7%)	130 (32.5%)	400 (100%)
Ability to handle complex issue	51 (12.7%)	43 (10.7%)	86 (21.5%)	75 (18.8%)	145 (36.3%)	400 (100%)
Language Preference (English/Yoruba)	55 (13.7%)	51 (12.7%)	96 (24%)	89 (22.3%)	109 (27.3)	400 (100%)
Empathy and Politeness	51 (12.7%)	55 (13.7%)	101 (25.3%)	74 (18.5%)	119 (29.8%)	400 (100%)
Availability (24/7)	45 (11.3%)	42 (10.5%)	76 (19%)	67 (16.7%)	170 (42.5%)	400 (100%)

The table shows that the most important factor for students when choosing between MTN's Zigi chatbot and human representatives was availability (24/7), rated very important by 170 (42.5%), followed by accuracy of answer 153 (38.3%), response speed 146 (36.6%); and ability to handle complex issues, 145 (36.3%).

Discussion

To answer research question one about the awareness and exposure of students to Zigi, **findings** from the study show that awareness of MTN's Zigi chatbot among Obafemi Awolowo University students is relatively low. Although more than half of the respondents were already aware of Zigi before the survey (269, 67.3%), only 18% of these rated their level of awareness and exposure as High and Very High. This suggests that while the chatbot exists within MTN's customer service system, many students either do not know about it or have not been exposed to it enough to form an opinion. There appears to only be a surface level knowledge about the Zigi chatbots amidst the respondents. These results align with the findings of Ben-Enukora et al. (2023), who examined the adoption of WhatsApp customer service chatbots among undergraduates in Lagos State. They found that awareness was inadequate and actual use was low, even though some respondents rated the performance of the chatbots above average. In both studies, it appears that a lack of exposure and promotional effort may be limiting awareness levels.

Research question two about frequency of use, results show that while some students have used the Zigi chatbot, the majority have not engaged with it for customer service purposes. 162 respondents (40.5%) reported using Zigi, whereas a larger proportion, 238 respondents (59.5%), said they had never used it. This indicates that more than half of the surveyed students have not interacted with MTN's AI chatbot. The low frequency of use may be linked to several factors highlighted in prior studies. Shumanov and Nakamura (2021) found that awareness and exposure to chatbot marketing campaigns significantly influenced adoption, with peer discussion and promotional activities driving engagement. In the Nigerian context, this suggests that limited visibility and insufficient promotion of Zigi may be key reasons for low usage rates.

For research question three, findings about the actual preference for customer service indicate a clear preference for human representatives over the MTN Zigi chatbot among Obafemi Awolowo University students. When respondents were asked the reasons behind their preference, the most selected factor was "more accurate/helpful," chosen by 146 respondents (36.5%). This suggests that students trust human representatives more when it comes to providing correct and useful solutions. These findings are consistent with Ciechanowski et al. (2019), who observed that users preferred human agents for complex or emotionally charged scenarios, while chatbots were chosen for routine transactions.

For research question four, findings show that several factors shape students' choice between chatbots and human representatives. The most influential factor in students' choice between MTN's Zigi chatbot and human representatives was availability. Many respondents valued 24/7 service, reflecting the importance of immediate access to customer support. This aligns with the nature of student life, where academic schedules, late-night study sessions, and irregular routines often lead to service needs arising outside typical working hours. The appeal of constant access is also consistent with Brandtzaeg and Følstad's (2017) findings, which show that users often turn to chatbots for convenience and instant responses. Similarly, the study conforms with the assumptions of Uses and Gratification theory and Technological Determinism theories.

Conclusion and Recommendations

The findings of this research suggest that although MTN's Zigi chatbot offers speed and availability, it falls short in several areas valued by users, particularly complex issue resolution, and perceived trustworthiness. The study therefore concludes that Students of Obafemi Awolowo University, representing a digitally literate population, showed openness to AI-driven support but still placed a higher value on human interaction for its problem-solving ability. The study therefore recommends that; Network providers should make it seamless to transfer chats from chatbots to a human agent, especially when issues involve account errors, transaction disputes, or prolonged service failures; wider awareness campaigns should still be done about the chatbot as many people are still not ware about it; and networks should regularly collect short feedback after chatbot sessions, focusing on how users felt, whether their issue was resolved, and what they expected.

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