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Exploring User Acceptance, Experience and Satisfaction towards Chatbots in an Online Travel Agency (OTA)

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Abstract

Progressive technological advancement of Artificial Intelligence (AI) such as Chatbots is changing the frontline services within the hospitality and tourism industry. Known as an automated program that mimics human interaction both via chat or voice assistant with the customers, chatbots can be found in numerous service-based websites and mobile apps including Online Travel Agency (OTA). User experience is a critical factor in the success of chatbots for customer service. Despite the growing number of hospitality and tourism firms adopting chatbots to deliver customer care, little attention has been paid towards chatbot users' reactions, particularly from the OTA standpoint. Underpinning the technology acceptance model (TAM), this paper proposed an examination of OTA chatbots' antecedents covering perceived ease of use (PEOU), perceived playfulness (PP) and perceived usefulness (PU); towards users' experience and satisfaction. The outcome of this study would bring valuable insights to both academicians and practitioners as more and more hospitality and tourism services are evolving rapidly within the digital business environment.

Keywords: Chatbot, Online Travel Agency (OTA), User Acceptance, Experience, Satisfaction

Introduction

According to Gretzel et al (2006), travelers are using information and communication technology (ICT) more and more frequently, starting with pre-trip information searches and reservations. Technology is becoming a game-changer (Siang et al., 2021) following the integration of chatbot, Artificial Intelligence (AI), robotics and other cutting-edge technologies solutions that are transforming business within the travel and tourism industries (Tussyadiah et al., 2020; Bowen & Morosan, 2018). Following the continuous integration of new

technologies in recent business activities, Artificial intelligence (AI) for instance is projected to take over jobs in the digital future (Letheren et al., 2020), particularly for text-based conversational agents (also known as chatbots). Chatbots have been used to facilitate services such as bookings, reservations, recommendations and other services, particularly in the tourist and hospitality business (Nica et al., 2018; Ukpabi et al., 2019).

Customer convenience and efficiency, reduced customer service times, increased knowledge, improved productivity, and customer pleasure are all advantages of innovative solutions like providing customers with customized experiences through the use of chatbots (Toader et al., 2020). Kvale et al (2019) revealed that the user experience is a critical factor in the success of chatbots for customer service. While a growing number of service companies are using chatbots to deliver customer care, user adoption has been slow (Ashfaq et al., 2020). According to Zeithaml (2013), customer satisfaction refers to a person's assessment of whether a product or service meets his or her needs and expectations. Djelassi (2018) added that customer satisfaction is a fundamental driver of system continuation intention and behaviours in the sphere of information systems.

The primary hypothesis that drives this research is the TAM model, which incorporates Davis's (1989) perceived ease of use (PEOU) and perceived usefulness (PU) presented by Davis (1989), as well as Moon and Kim's (2001) inclusion of antecedent of perceived playfulness (PP). At first, the technology acceptance model (TAM) was created to investigate the elements that influence user adoption of computer systems. Later, it was expanded to assess user acceptance criteria for a variety of information technologies (Huang & Chueh, 2020). With the rise in popularity of wireless networks and mobile devices in recent years, the technology acceptance model has become a common tool for assessing user acceptance criteria for mobile applications and distant services (Huang & Chueh, 2020). Although digitally equipped consumer-facing platforms are popular in many industries, some people find it challenging to use technology to support themselves. It's not easy to go from traditional user interfaces like websites and apps to chatbots as a popular way of connecting with information and services. There is a lack of data on how customers react to chatbots replacing human customer service representatives, as well as how the presence of chatbots in online social networks affects multi-party interactions and knowledge transmission (Mouchine, 2021). It is proposed that the perceived ease of use, perceived playfulness, and perceived usefulness of a Self-Service Technology (SST) such as a chatbot will influence the customers' experience and that as experience build-up, it will be able to predict the customers' expectations and satisfaction judgement (Bilgihan et al., 2016; Haung & Liao 2015; Wang et al., 2013).

Online travel agencies (OTAs), like Booking.com and Expedia, are travel aggregators that communicate with potential customers online to market travel-related goods like flights, cruises, vacation packages, hotel rooms, and more (Rezgo, 2019). Talwar et al (2020) added that OTAs are rapidly growing across the globe, and consumer adoption of OTAs is an international phenomenon. Academic studies on customer behaviour related to OTAs, such as on satisfaction Kourtesopoulou et al (2019), loyalty Shen (2018), and e-WOM Hermawan (2022) have been inspired by OTAs' growing popularity. Despite the growing body of literature on chatbots, little attention has been paid to the aspect that influences customer satisfaction with OTAs. Consumer satisfaction by Chung et al (2018) and continuous intention (CI) by Ciechanowski et al (2019) have also been studied in the relation to chatbots. However, these studies are not focused on chatbots in online travel agencies. Chung et al (2018) for example look into chatbots and customer satisfaction in the setting of premium brands, whereas Ashfaq (2020) looks into the impactof chatbots on consumer pleasure, brand attitude, and

purchase intention in the context of e-commerce to improve customer satisfaction. Having said that, this paper proposed an examination of OTA chatbots' antecedents covering perceived ease of use (PEOU), perceived playfulness (PP) and perceived usefulness (PU); towards users' experience as well as satisfaction.

The results of the study will provide the necessaryand important practical information for users from different acquisitions in evaluating the quality of services provided. The findings of this study offer quality assurance professionals, service providers, and chatbot developers practical advice to better comprehend chatbot consumers to improve their service adoption within the travel and hospitality industry (Li et al., 2021).

Literature Review

Online Travel Agency

The integration of online and offline channels for businesses has gotten more attention as the Internet has progressed. A growing number of businesses provide their products or services both online and offline. The shopping and banking industries for example have expanded their companies through online channels and encouraged clients to adopt online services by upgrading their offline experiences (Chang et al., 2018). The hospitality and tourism industry has been changed by the Internet, particularly in terms of distribution methods according to (Lv et al., 2020). An online travel agency (OTA) is a website that provides travel information as well as booking choices for products and services (Jasni et al., 2020). However, Irgashevich et al (2022) argued that a complete information system that will offer all the services offered by the real agency is not necessarily implied by the existence of a travel agency on the Internet. The use of OTAs by consumers is a worldwide phenomenon (Talwar et al., 2020). OTAs are rapidly growing in popularity around the world (Talwar et al., 2020). The hospitality industry, particularly the hotel industry, which offers lodging to passengers, is one of the fastest-expanding sectors in the travel industry (Global Hospitality Portal, 2019).

These online distribution channels enable hospitality businesses to not only expand their market by adopting online sales channels (Chang et al., 2018) but also give clients convenient access to hotel services and goods regardless of time or location. Meanwhile, from the perspective of Talwar et al (2020) online travel bookings can be made directly on a service provider's website (for example, reserving a hotel room on Marriott.com) or through online travel agencies (OTAs), which combines the services offered by several travel and tourism-related organizations. Rezgo (2019) advocate the view that OTAs use websites and apps to sell travel and tourism-related products like hotel rooms, airline tickets, taxis, and vacation packages. Ray and Bala (2021) also indicated that hotels can draw repeat business through perceived value, whereas OTAs can do so through the quality of their websites' services.

Chatbot

People's lives have become increasingly dependent on technology in recent years. Conversational agents, also known as chatbots, are gradually becoming a popular marketing tool for strengthening client connections, thanks to technological improvements that have accompanied the rapid rise of digital platforms and social networks (Mouhcine, 2021). Luo et al (2019) describe chatbots as programmes that employ voice commands or text chats to replicate human discussions and act as virtual assistants for users. Miguel and Huertas (2022) in their studies mentioned that applications that can improve visitor experiences and create additional value are referred to as "Smart Tourism Technology" (STT) and the chatbot is considered one example of STT. Depending on the artificial intelligence resources involved,

these systems can perform activities as simple as mailing plane tickets or as complicated as providing health, financial, or retail advice (Araujo, 2018). Human chatbot interactions are most commonly found in the context of "conversational marketing," which includes, among other things, conversational commerce, which entails talking with customers and allowing them to make purchases through platforms like Facebook Messenger (Tuzovic & Paluch, 2018).

According to Folstad et al (2021), chatbots are becoming more widely used, particularly in customer support. Customers who require information or wish to make a complaint can type their questions into a dialogue screen which often resembles a chat interface and receive natural language responses. The key feature of this sort of communication is that, even though the responses are created automatically, the conversation is designed to mimic a human-to-human chat. Folstad et al (2021) also mentioned that on a corporate level, chatbots are increasingly being used for marketing purposes such as customer relationship management (CRM), pre-and post-purchase support, and customer service, as they represent a potentially cost-effective solution that can save up to 90% depending on the characteristics of the functions being automated. Some studies revealed how chatbots influenced user satisfaction in some contexts. Chatbots and client satisfaction in the setting of premium brands are investigated by (Chung et al., 2018). They discovered that utilizing chatbots for e-service increases brand satisfaction because chatbots can engage customers and provide interactive customer assistance. In the context of e-commerce, Holzwarth et al (2006), as referenced in Ahsfaq et al., 2020) investigate the impact of virtual agents on consumer satisfaction, product attitude, and purchase intention. Because such new technologies have the potential to satisfy the user's needs/desires by providing personalised information, making the shopping experience more enjoyable, they find that virtual agents in online shopping lead to greater consumer "satisfaction with the retailer, a more positive attitude toward the product, and a greater purchase intention".

As a result, firms can improve customer happiness by interacting with chatbots. According to Abbas (2019), real estate (28 percent), tourism (16 percent), education (14 percent), healthcare (ten percent), and finance (ten percent) are the top five businesses benefiting from chatbots (5 percent). However, Luo et al (2019) revealed that despite the potential benefits of chatbots, one of the most significant challenges this technology faces is potential client resistance. In reality, many consumers are still hesitant to talk to computer programmes about their personal wants or purchase decisions. Many businesses that use chatbots are torn between exposing the artificial nature of the channel to customers and risking negative consequences as a result of the bot being perceived as a less knowledgeable and empathic entity (Luo et al., 2019).

User Satisfaction

According to Bhattacherjee (2001) as cited in Ashfaq (2020), user satisfaction is a key factor in their continuance intention toward technology. It's also known as the core antecedent in marketing (Brill et al., 2019), and it's crucial for attracting and maintaining long-term clients (Ashfaq et al., 2020). E-commerce is a new trend in which industry players on a national scale rely on a service-based business strategy. As a result of this trend, more consumers are making online purchases rather than offline purchases. To ensure their success and effectiveness, online travel agencies (OTAs) must meet or exceed user satisfaction and trust (Min et al., 2020). According to Nguyen et al (2022), perceived autonomy promotes perceived competence in a favourable way, which then has a positive effect on performance satisfaction and system satisfaction. Therefore, it is crucial to create interfaces that contribute to boosting perceived autonomy. The competition will become even more fierce as more emphasis is placed on online

shoppers. It will also make it difficult for travel agencies to maintain consistent service levels (Chen et al., 2020). As a result, OTAs must always meet consumer satisfaction to avoid losing clients.

Park et al (2019) also found that booking through apps has a positive impact on user satisfaction, resulting in increased user factor intentions. User satisfaction is one of the constructs that is frequently used in systems research to assess the system's success and effectiveness. Mkpojiogo & Hashim (2016), as cited in Lubbe & Ngoma (2021) stated that satisfaction is thus an evaluation of whether the products or services meet the needs and desires of the customers. The importance of user satisfaction cannot be overstated. This is because determining the level of user satisfaction can reveal whether or not customers believe the services provided are enjoyable and fit their demands (Feine et al., 2019). High levels of client satisfaction are critical for long-term success, especially in a highly competitive industry. As a result, it becomes a top priority for any company. The researchers found an opportunity in the study's context that user satisfaction can be extended to chatbot case services as well. User satisfaction is a critical factor in ensuring customer loyalty and corporate success (Komalasari & Budiman, 2018). Users will be satisfied with the chatbot service if they believe the chatbot service has matched their initial expectations. As a result, they will be more likely to use the service in the future. However, Waldmann (2021) claimed that as chatbots are already widely used, those who are open to experimenting with new technologies may also be more receptive to this new and emerging trend of chatbots. In conclusion, early adopters are more likely to view chatbots favourably and are hence more likely to be satisfied with them.

Chatbot Experience

Customer experience, according to Chan and Leung (2021), is a combination of user perceptions and responses coming from the use of a product, system, as well as service. Customer experience is commonly characterised as a dynamic and holistic, direct or indirect, contact between a customer and a company that includes components such as thoughts, feelings, actions, relationships and sensations (Sidaoui et al., 2020). Chatbots are one of these technical advancements, and they play a critical role in improving consumer-brand or company connections and providing a better customer experience (Ambawat, 2019). Chatbots enhance the online consumer experience by giving the impression of a real person communicating and providing at the appropriate time (Gümüş & Çark, 2021). Gümüş and Çark (2021) also added that chatbots assist brands and businesses in maintaining contact with their customers while also improving user experience and brand trust. Satisfaction is the consequence of the customer's appraisal of the technological experience meeting their expectations (Lubbe & Ngoma, 2021). Customers are more satisfied with chatbots that deliver an excellent and engaging customer experience, according to (Diaz, 2019; Jain et al., 2018). A positive chatbot experience will improve the service and, as a result, the customer's satisfaction with the chatbot (De Haan et al., 2018; Djelassi et al., 2018). A few academics have investigated the connection between happiness and smart tourism experiences. Lee et al (2018) discovered that when South Korean visitors evaluate their overall pleasure, they are likely to place greater weight on what they perceive from their destination travel experiences than what they perceive from their encounters with smart tourism technology (STT) services meanwhile Kim and Hall (2019) looked at the hedonic motivation adoption frameworks for virtual reality (VR) tourism and discovered that subjective wellbeing is significantly impacted by perceived enjoyment.

Technology Acceptance Model (TAM)

TAM is a well-known and often used model in technology adoption studies that looks into people's behavioural intentions to adopt new technology (Pillai & Sivathanu, 2020). Rafique et al (2020) justified that the Theory of Reasoned Action (TRA) was developed by Ajzen and Fishbein (1980) and it states that an individual's behaviour is determined by his or her behavioural intention (BI), which is determined by subjective standards and attitude. Rafique et al (2020) also revealed that Davis (1989) later extended the theory by proposing the Technology Acceptance Model (TAM) which consists of two basic factors: perceived usefulness (PU) and perceived ease of use (PEOU). Huang and Chueh (2021) stated TAM assumes that some external variables, such as perceived usefulness and perceived ease of use, which are mediators within external variables that affect willingness to use a system, influence perceived usefulness and perceived ease of use. As a result, TAM can serve as a foundation for establishing correlations between external variables, internal beliefs, attitudes, readiness to use, and actual usage. According to Lubbe and Ngoma (2021), perceived playfulness (PP) was extended in the TAM antecedents by Moon and Kim (2001) and this model has proven to be a reliable tool for explaining new technology acceptance, as it accurately represents user behaviour across a wide range of user groups and end-user technologies. This statement was in line with Junnonyang's (2021) study's findings that revealed in addition to the validated TAM (Davis, 1989) framework's emphasis on perceived usefulness, perceived ease of use, and technology adoption, trust, self-efficacy, relative advantage, and government support play a significant role in persuading citizens to adopt mobile government TAM is used in this research to analyses the user satisfaction of chatbots for tourism planning because chatbots are a new technology in the travel and tourism business. TAM attitude is defined in this study as " chatbot experience and user satisfaction," which is indicated as the level of satisfaction influenced by the chatbot experience in the context of online travel agencies (OTAs).

Methodology

In accessing users' acceptance, experience and satisfaction towards chatbots in OTA, a quantitative research approach using a self-administered survey will be employed. Taking into consideration the unavailability of the sampling frame (to determine the exact figure of OTAs chatbot users in Malaysia), a non-probability convenience sampling technique will be applied for data collection. Adopting Roscoe's (1975) rule of thumb, a sample size between 30 and 500 is deemed appropriate for this social science research. Potential respondents will be given access to participate in the online survey (via Google Forms). A dual language research instrument (both in English and Bahasa Melayu) will be applied to ease respondents' understanding of the subject matter. Relevant preliminary questions are included to ensure that only qualified respondents participate in this study. Descriptive statistics, frequency, means score, the link between variables as well as mediation tests will be performed on the usable data using Statistical Packages for the Social Science (SPSS) Version 28 and Sobel Test.

Research Contributions

From the academic's perspective, this study will reveal the most significant aspect of TAM's antecedents that led to the user's satisfaction with OTAs through chatbot experience in Malaysia. Following this study, the researcher will be able to identify antecedents that influence chatbot experience and user satisfaction of OTA users in a local setting. Besides, this study will explain the relationship between TAM's antecedents, chatbot experience and user satisfaction of OTAs in Malaysia. While studies that observe TAM's antecedents and user

satisfaction in the context of chatbot in OTAs among Malaysian remains elusive, thus this study is going to be a pioneer reflecting the latest trends of locals' OTA users; and adding the body of literature relevant to TAM's antecedents and user's satisfaction.

From the practitioner's point of view, results from this study will provide essential practical information for users from different acquisitions in evaluating the quality of services provided. Through this research, practitioners including industry players, travel agents, tour operators, travel associations, chatbot developers and online travel agencies provider can improve the quality of service offered to maintain the level of customer satisfaction that uses their platforms. Quality services that can be improved are from what their user going to perceive in terms of ease of use, playfulness and usefulness of chatbot. This is important to create loyalty to the services offered without changing direction to other platforms. Existing online travel agencies (OTA) developers can enhance their service adoption by analyzing what drives their customer satisfaction following the outcome of this study. Such improvement is deemed valuable as more and more hospitality and tourism services are evolving rapidly within the digital business environment.

Conclusion

Despite the growing number of hospitality and tourism firms adopting chatbots to deliver customer care, little attention has been paid towards chatbot users' reactions, particularly from the OTA standpoint. Underpinning the technology acceptance model (TAM), it is imperative to examine OTA chatbots' antecedents covering perceived ease of use (PEOU), perceived playfulness (PP) and perceived usefulness (PU); towards users' experience and satisfaction. The outcome of this study would bring valuable insights to both academicians and practitioners as more and more hospitality and tourism services are evolving rapidly within the digital business environment.

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