國立臺灣師範大學管理學院全球經營與策略研究所

碩士論文

Graduate Institute of Global Business and Strategy
College of Management
National Taiwan Normal University

Master's Thesis

以在航空業為例，探討在輕微和嚴重的服務失誤中，智能聊天機器的語氣對客戶的再購買意向的影響程度

Behind intelligence chatbots: impact of the tonality on customer's re-patronage intention during mild and severe service failure in airline industry

何鎧詒

Ho Hoi Yi

指導教授: 洪秀瑜 博士

Advisor: Hsiu-Yu Hung, Ph.D.

中華民國 112 年 6 月

June, 2023

Abstract

This thesis delves into the utilization of chatbots as a viable recovery tool to address service failures within the airline industry. In today's highly competitive airline sector, where customer service and satisfaction play a pivotal role, chatbots offer a prompt and personalized means of assisting customers who have encountered service setbacks. By efficiently managing numerous customer inquiries simultaneously, chatbots effectively minimize wait times and streamline the resolution process, thus curbing the escalation of service failures. Additionally, chatbots serve as valuable sources of feedback, providing insights that can be utilized to enhance overall service offerings. The findings of this thesis suggest that chatbots are gaining significant traction as a preferred recovery tool within the airline industry, offering substantial potential to elevate customer experiences and manage service failures more effectively. As technology continues to advance, further research and exploration in this area can uncover innovative ways to optimize the use of chatbots, enabling airlines to better meet customer needs and exceed their expectations.

Overall, the study underscores the growing recognition of chatbots as an integral component of service recovery strategies in the airline industry, contributing to improved customer satisfaction and enhanced operational efficiency.

Keyword: Service Failure, Chatbot, Service Recovery, Customers Re-patronage

Table of Contents

CHAPTER ONE INTRODUCTION

1.1 Background

Nowadays, the airline industry is one of the fastest-growing industries in the world. It has seen continuous growth over the years, as people have increasingly relied on air travel for business and leisure, especially in the post-pandemic era. With the introduction of new technologies, airlines have made significant progress in satisfying their customer's needs. Airlines provide many services like ticketing, flight details, and others which makes them the backbone of aviation.

In today's highly competitive airline industry, customer service is a key factor in maintaining customer loyalty and ensuring customer satisfaction. The way in which an airline interacts with its customers has a profound impact on customer experience and how customers perceive the brand. As such, it is becoming increasingly important for airlines to develop strategies to ensure that their customer service remains of a high standard and that their customers feel valued and respected.

1.2 Research Motivation and Purpose

The motivation for investigating chatbots in the airline industry is to explore the potential benefits and effectiveness of using these AI-based tools for improving customer engagement, service delivery, and overall operational efficiency. Chatbots are computer programs that use natural language processing (NLP) to interact with customers through messaging platforms, mobile apps, or voice assistants. Chatbots have become increasingly popular across different industries, and the airline industry is no exception.

The size of the global chatbot market is anticipated to reach USD 9.4 billion by 2024, rising at a CAGR of 29.7% over the course of the forecast year, according to a report by Research and Markets (Global Chatbot Market to Reach US$ 9.4 Billion in 2024 – Reogma, 2020) . The report emphasizes the rising demand for chatbots powered by AI across a range of sectors, including BFSI, healthcare, retail, and e-commerce. Chatbots are also being used in the aviation sector to improve customer service, cut expenses, and increase productivity.

The purpose of investigating chatbots in the airline industry is to evaluate their effectiveness in addressing customer needs and preferences, enhancing customer engagement, and improving operational efficiency. The study aims to identify the specific areas where chatbots can be deployed, their potential impact on customer satisfaction, and the challenges associated with their implementation.

One of the critical areas where chatbots can be deployed in the airline industry is customer service. Chatbots can provide personalized and real-time customer support, responding to inquiries and providing assistance in a more efficient and effective manner than traditional customer service channels. As suggested by Juniper Research analysis, chatbots could save businesses up to USD 8 billion annually by 2022, up from USD 20 million in 2017(Chatbot Conversations to Deliver $8 Billion in Cost Savings by 2022, 2017) . The use of chatbots for customer support and other commercial purposes can result in cost savings.

Another area where chatbots can be deployed in the airline industry is marketing and sales. Chatbots can help airlines provide personalized recommendations to customers based on their preferences, purchase history, and browsing behavior. 59% of consumers agree that customization influences their purchasing decisions, according to a research by Accenture (Life Reimagined: How our values have changed, 2021). Additionally, chatbots can be incorporated with social media sites to engage users, advance brand recognition, and produce leads.

Chatbots can also assist airlines in increasing operational effectiveness by automating repetitive jobs like the booking and check-in procedures. The global chatbot market for customer service is anticipated to reach USD 1.25 billion by 2025, expanding at a CAGR of 24.3% during the forecasted period, according to a report by Grand View Research (Chatbot Market Size Worth $27,297.2 Million by 2030, 2023) . The study emphasizes the growing demand for chatbots in customer care and support roles since they may speed up responses, increase accuracy, and boost client happiness.

1.3 Introducing Chatbot as a Recovery Tool

In recent years, the use of chatbots in customer service has become increasingly popular across various industries. The airline industry is no exception, and many airlines have adopted chatbots to improve their customer service experience. In this essay, we will discuss why airlines are using chatbots for customer service and how this technology can benefit the industry.

One of the key advantages of using chatbots as a recovery tool is that they can provide immediate and personalized assistance to customers who have experienced a service failure. For example, if a flight is delayed or cancelled, passengers may become frustrated and anxious. By using a chatbot, the airline can quickly respond to these concerns and provide personalized solutions that meet the individual needs of each passenger. This can help to mitigate negative experiences and prevent customers from becoming further dissatisfied with the airline.

Another advantage of using chatbots is that they can handle a large volume of customer inquiries simultaneously, reducing wait times and increasing efficiency. 75% of users expect a response from a chatbot within five seconds, according to a survey by Chatbots Magazine (25 Chatbot Statistics for 2020 That You Need to Know, 2020) . This means that in order to give customers a favorable experience, chatbots must be developed to answer fast and effectively while still

employing appropriate language. In the airline industry, where flight delays and cancellations can lead to a surge in customer inquiries, chatbots can provide rapid and accurate responses to customers without the need for additional staff. This can help airlines to manage customer expectations and prevent further escalations of service failures. A study by Customer Think found that 24% of consumers expect a response within an hour and 54% expect one within 24 hours of placing a customer service enquiry (Share An Online Entry "The Impact of Chatbots on Customer Loya, n.d.). Which makes a critical factor for choosing chatbot as a service recovery tool.

Moreover, chatbots can help airlines to collect valuable feedback from customers, which can be used to improve their overall service offerings. By analysing customer interactions with chatbots, airlines can identify patterns and trends in service failures and take corrective action to prevent similar issues in the future. This can help airlines to enhance their reputation and improve customer satisfaction levels over time.

Airlines have already begun to implement chatbots as a recovery tool for service failures with great success. For example, KLM Royal Dutch Airlines has developed a chatbot called BB that provides customers with personalized travel information, such as flight updates, boarding passes, and hotel reservations. Data revealed that KLM Bot is able to handle 2 times more customers request (GUTIERREZ & KHIZHNIAK, 2018). The chatbot also handles customer inquiries and provides support in multiple languages (KLM Bot — ChatbotGuide.org, n.d.). Similarly, Delta Airlines has launched its own chatbot, which allows customers to access flight information, rebook cancelled flights, and request refunds (Delta to Launch Chat Feature, Enhanced Meetings Options for Corporate Travelers | Delta News Hub, 2022).

Figure 1-1

KLM Bot offering different customers services (GUTIERREZ & KHIZHNIAK, 2018)

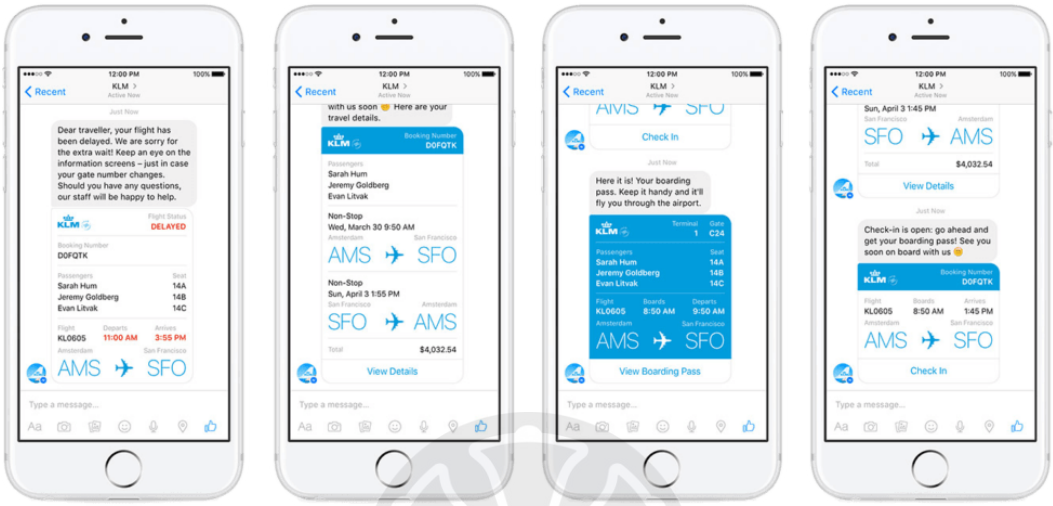
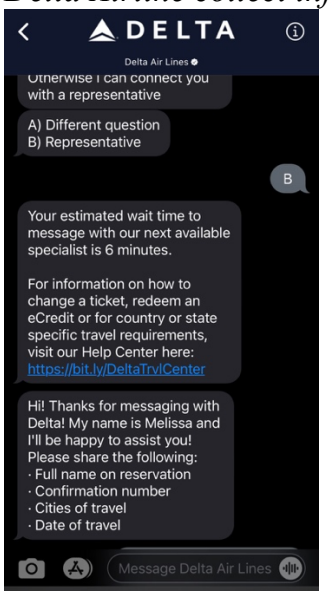


Figure 1-2

Delta Airline collect information to shorten waiting time (Potter, 2022)



Moreover, service failures can be a major source of frustration for customers, and they can have a significant impact on the re-patronage intention of customers and building trust with customers after service failure. Apart from developing

and reviewing current service failure policy and measures, it is also important to develop new and effective strategies to interact with customers during service failure.

When a service failure occurs, it is important for airlines to respond quickly and effectively to resolve the issue and restore customer satisfaction. By researching service recovery in the airline industry, researchers can identify the most effective strategies for addressing customer complaints and restoring customer trust, and by researching the use of chatbots, researchers can identify the most effective ways to use this technology to enhance the customer experience and deal with service failure more effectively.

The airline industry has been one of the hardest-hit industries during the COVID-19 pandemic. With global travel restrictions, grounded flights, and a decrease in demand, airlines are facing significant financial challenges. As the industry starts to recover, airlines are looking for innovative ways to enhance the customer experience while keeping costs low (How AI and machine learning are helping to tackle COVID-19, 2020). Chatbots have emerged as a potential solution for airlines to improve customer service and recovery efforts.

Chatbots are computer programs that simulate conversation with human users. They can be integrated into a variety of platforms, such as social media messaging apps, websites, and mobile apps (What Is a Chatbot? | IBM, n.d.). Chatbots can be programmed to respond to a range of customer queries and provide personalized support and assistance 24/7. In the context of the airline industry, chatbots can be used as an effective recovery tool to assist customers during flight disruptions, cancellations, or delays.

One of the key benefits of using chatbots as a recovery tool is that they can handle a large volume of inquiries simultaneously. During flight disruptions, airlines often face a surge in customer inquiries, and call centers can quickly become

overwhelmed. By using chatbots, airlines can handle a high volume of inquiries efficiently and effectively, reducing customer wait times and improving satisfaction levels.

Moreover, chatbots can provide real-time updates and personalized assistance to customers (Franco, 2022). They can access customer data, such as flight details, preferences, and past interactions, to provide personalized recommendations and assistance. Chatbots can also integrate with airline systems, such as booking and reservation systems, to provide real-time updates on flight status and schedule changes. This can help customers make informed decisions and minimize the inconvenience caused by flight disruptions.

Another advantage of using chatbots as a recovery tool is that they can be available 24/7. This means that customers can get assistance at any time, regardless of their time zone or location. This can be particularly valuable for international travelers who may face language barriers or cultural differences when trying to get assistance.

1.4 MAMA Recovery Framework

MAMA recovery framework widely used in customer recovery strategies (Solomon, 2021), and it is also an effective recovery framework for airline industry as it emphasizes the importance of listening, acknowledging, meeting of minds, and acting to resolve customer issues. As this is an effective approach to customer recovery, below will explain how it can be adopted in a chatbot.

Firstly, the "M" in MAMA stands for making time to listen. It is essential for airline to listen to their customers and understand their concerns. By actively listening to customers, the company can identify the root cause of the problem and provide suitable solutions timely. In the context of chatbots, this means programming the chatbot to actively listen to customers and gather information

about their issues. Where there is no limitations on what information the chatbot can collect, all the contents that the customers type into the chatbot can be collected by the airline officers, where the officers can identify easily and modify the service they are delivering to the consumers.

The "A" in MAMA stands for acknowledging and calling for an apology. Customers expect businesses to take responsibility for their mistakes and apologize when necessary. Acknowledging the issue and apologizing can help rebuild trust with customers and prevent further damage to the relationship. In a chatbot, this means programming the bot to acknowledge and apologize for any errors or issues customers may be experiencing.

The second "M" in MAMA stands for meeting of minds. It is crucial for businesses to work with their customers to find a mutually beneficial solution. By involving customers in the problem-solving process, businesses can build trust and strengthen their relationship with them. In the context of a chatbot, this means programming the bot to offer solutions that are tailored to the customer's needs and preferences.

Finally, the "A" in MAMA stands for acting and following up. Once a solution has been agreed upon, it is important for businesses to act on it promptly and effectively. Following up with customers after the issue has been resolved can also help to ensure that they are satisfied with the outcome. In a chatbot, this means programming the bot to take action to resolve the issue and to follow up with the customer to ensure their satisfaction.

1.5 Alternatives of Using Other Recovery Tools

Concluding the benefits of chatbots above, chatbots are a valuable service recovery tool in the airline industry. They are available 24/7, can handle a high volume of inquiries simultaneously, and provide consistent and accurate

responses. They can also be programmed to use positive and empathetic language, which can help to reduce customer frustration and increase satisfaction. Moreover, chatbots can collect data on customer inquiries and provide insights that can help airlines improve their services. While chatbots have some limitations, such as their inability to handle complex issues, their benefits outweigh their drawbacks in terms of service recovery. Therefore, chatbots are an effective and efficient way for airlines to provide timely and satisfactory service to their customers.

Comparing to other recovery tools, in-person customer service representatives is the most common and traditional recovery tool in airline industry. Summarizing the benefit in-person customer service representatives, it allows customers to speak to a representative face-to-face, which can increase their confidence in the resolution process, and the representative can use nonverbal cues, such as eye contact and body language, to convey empathy and understanding. However, using customer service ambassadors can be more costly and less efficient. Customer service ambassadors require training, resources, and salaries, which can add up to significant costs for airlines. Additionally, they may not be able to handle a high volume of inquiries simultaneously, leading to longer wait times for customers which can be frustrating and time-consuming. Moreover, customer service ambassadors may not be available 24/7 depending by airlines operating hours, which can limit their effectiveness in assisting customers during flight disruptions.

Phone and emails are also a traditional recovery tools for airline industry, similarly, these tools can provide a personalized experience that can help build trust and loyalty. However, customers may experience long wait times or be put on hold, which can be frustrating for customer that are facing service failure, and customers will be seeking for an immediate repones.

Another common recovery tool for airline industry will be self-service kiosks in

airport. Self-service kiosk allows customers to access information and resolve issues quickly and easily, it can reduce wait times and improve the overall airport experience and it can be a scalable option for airlines with a large customer base (Troxell, 2020). Although it can greatly reduce airport congestions and improve customer service, customers may have technological issues or have trouble utilizing the kiosks; they might not be available or functioning properly, which can cause annoyance; it might also be challenging to deliver individualized answers or successfully convey empathy and understanding.

A similar recovery tool that is common in the digital age will be social media. It is not uncommon to see that customers looking for customer service in social media platform, especially for travel related industry (Today, 2022) .While social media is a public platform where current customers and future potential customers might access, negative comments or complaints on social media could be deadly to airline companies as it can be amplified quickly and spread rapidly through social media, which can damage the airline's reputation. In terms on responding to customers through social media, it is difficult to provide personalized solutions or convey empathy and understanding effectively, and airline may not be able to control the timing or frequency of customer inquiries which may lead to late responses or dissatisfaction of customers.

While after evaluating the current recovery tools, we can see that the airline industry needs to develop new service recovery tools to keep up with the changing customer expectations and demands. Customer preferences and behaviors are evolving, and airlines need to adapt to these changes to remain competitive. Developing new recovery tools can help airlines provide more personalized and efficient services, which can lead to increased customer satisfaction and loyalty. It can also help airlines differentiate themselves from their competitors and gain a competitive edge. Therefore, it is essential for airlines to invest in new service recovery tools to improve their customer service and overall business performance.

1.6 Importance of the Chatbot's Tonality During Service Recovery

The use of chatbots in various industries has become increasingly prevalent. These automated systems can be used to provide customers with quick and efficient answers to their questions and concerns, making them an essential tool for businesses. However, a chatbot's tonality is just as crucial as its functionality because tonality establishes the manner of conversation with a user. The tone of speech is a crucial component of conversational designs and has a big impact on how users interact with chatbots (BOTfriends, 2022). This is particularly true in the airline industry, where chatbots can play a crucial role in improving customer experience.

One of the key benefits of a chatbot is that it can provide customers with immediate assistance, without the need for them to wait on hold for a customer service representative. However, if the chatbot's tonality is not appropriately calibrated, it can leave customers feeling frustrated or ignored, ultimately leading to a negative experience.

For instance, consider a customer who is trying to book a flight and encounters a chatbot that seems robotic or impersonal. This customer may feel like their needs are not being addressed, and the chatbot's inability to connect with them on a human level may make them less likely to use the airline's services in the future. On the other hand, a chatbot with a friendly and conversational tonality can help customers feel more at ease and satisfied with the experience.

Furthermore, a chatbot's tonality can also play a role in shaping the overall brand image of an airline (Ruan & Mezei, 2022). For example, an airline that wants to position itself as modern and tech-savvy may opt for a chatbot with a more informal and friendly tone, while a luxury airline may prefer a chatbot with a more formal and polished tone.

1.7 Using Chatbot to build trust and increase re-patronage intention

Chatbots can be a valuable tool in building trust, customer loyalty, and increase re-patronage intention for airline customers during service failure and recovery. Re-patronage intention (Jones et al., 2006) is defined as the likelihood that a customer will return to the location in the future, whereas the consumer's allegiance is a fervent attachment to a particular brand or retailer (Hirschman & Holbrook, 1982).

Chatbots can provide customers with instant assistance and support, which can build trust and confidence in the airline's customer service (Ruan & Mezei, 2022). By using a chatbot, customers can quickly resolve issues, get answers to their questions, and receive updates on their flights, which can increase their satisfaction to their service provider, which is the airline company in this situation.

Secondly, chatbots can be programmed to personalize the customer experience. By using artificial intelligence and natural language processing, chatbots can provide a personalized experience for customers, leading to increased customer loyalty (Jenneboer et al., 2022). Personalization is key to building customer loyalty as it shows that a company values and understands its customers' preferences and needs.

Chatbots can provide personalized recommendations, offer product suggestions, and even tailor promotions and discounts based on a customer's purchase history and browsing behavior (Hoffman, 2023). For example, an airline chatbot can use data from a customer's previous bookings and interactions to offer tailored recommendations for flights, seats, and services that the customer might be interested in. This personalized service can make customers feel valued and appreciated, which can increase their loyalty and willingness to choose the airline again.

Thirdly, chatbots can help improve customer retention by providing proactive support and assistance (Selamat & Windasari, 2021). By monitoring customers' flight statuses, preferences, and behavior, chatbots can proactively offer assistance when needed, such as rebooking a flight in case of a cancellation or offering additional services and upgrades. This proactive approach can make customers feel valued and cared for, which can increase their loyalty and willingness to choose the airline in the future.

This master thesis aims to provide insight on the tonality of chatbots to increase customer's re-patronage intention after using chatbot as a recovery tool during service failure. Technology has made it feasible for businesses to have continuous online communication with their clients, as opposed to the past when they could only do so via in-person interactions or through the media. As a result, businesses place a high priority on being accessible online at all times in order to compete online and stay in touch with their clients for a positive online service and experience. If using chatbot as a recovery tool and a communication tool to connect and interact with client, it is also important to examine which chatbot tonality will be most effective in building trust during the recovery process during different circumstances of failure.

This study provides more insight in using chatbot in airline industry during service failure and different underlying aspects, and how chatbots may adapt to the evolving needs of today's consumers to achieve customer re-patronage. To do this, the thesis will explore the concept of different tonality and its advantages and disadvantages in the context of the airline industry.

In order to conduct its research, the thesis will employ a variety of methods, such as literature review and experiment. By using these two methods, the thesis will be able to gain a comprehensive understanding of the use of tonality in the airline industry and the potential benefits and drawbacks of using this recovery tool.

The findings of this thesis will be of great interest to airline managers, customer service professionals, and academic researchers. This study will provide a better understanding of the impact of introducing different tonality in the airline industry and the potential benefits and drawbacks of using this strategy. Furthermore, the findings will help to inform the development of customer service policies and strategies in the airline industry.

CHAPTER TWO LITERATURE REVIEW

2.1 Chatbot in Service Industry

Chatbots are rapidly becoming one of the most popular tools for providing customer service in the service industry. Chatbots can be used to help customers select the best flights for their needs (Rodrigues, 2022). By asking customers about their preferences for departure and arrival times, number of travelers, and other details, a chatbot can generate a list of the best possible flights to choose from. The chatbot can then provide additional information on each flight, such as cost, duration, and airline details. This allows customers to make informed decisions quickly and easily.

According to a survey by Acquire, 40% of consumers prefer chatbots to human agents when it comes to customer service inquiries (Key Chatbot Statistics You Should Follow in 2023, n.d.), such as selecting flights. Chatbots can be used to search for available flights and help customers check their current flight status (Rodrigues, 2022). By entering their flight number, customers can see if their flight is on time, delayed, or cancelled. This information can also be used to alert customers to any changes in their flight times or to any special offers or discounts that may be available.

Artificial intelligence (AI) chatbots are being used by more businesses to assist

customers on the front lines (De Keyser et al., 2019).The service industry is an important component of today's economy, and the introduction of chatbot technology is revolutionizing the way that businesses interact with their customers (Menon, 2022). According to a study by Oracle, they found that 68% of consumers would be more likely to do business with a company that had chatbots available to answer questions (Oracle, 2019). This highlights the importance of incorporating chatbot technology in customer service strategy as it can positively impact customer satisfaction and potentially increase business revenue.

The technology behind chatbots is actually artificial intelligence. They employ machine learning (ML) and natural language processing as their two types of AI (Suta et al., 2020). The process through which a computer learns from experience, just like people do, is known as machine learning. A chatbot can utilize machine learning to learn more over time as it receives more user input. Computers are taught to comprehend and reply to queries that are posed in human language through the use of natural language processing.

Chatbot uses artificial intelligence to simulate conversation with a human user. It can be used to answer customer queries, process orders, provide customer service, and even provide marketing advice. Numerous service sectors, including customer service, healthcare, banking, and retail, have already embraced the usage of chatbots to a large extent. Chatbots can be used in the customer service sector to rapidly and accurately respond to client enquiries and to make customised recommendations based on the needs of the consumer (Nuruzzaman & Hussain, 2018). This technology has been proven to provide a better customer experience and reduce customer wait times (Kasinathan et al., 2020).

In international businesses, chatbots are used in a variety of ways. For example, in the travel sector, Marriott International offers members of Marriott Rewards to look up and reserve trips to more than 4,700 hotels. Users can also make future

travel plans while interacting live with the Customer Engagement Center by connecting suggestions from Marriott's online publication Marriott Traveler (Marriott International's et al., 2017). In airline industry, airline companies offering AI chatbot to check in. In 2015, 32% of passengers used online check-in, with about 50% of all flight check-ins occurring through an agent or at the check-in desk. In 2021, the roles have been reversed, with only 27% of airline check-ins occurring at the counter and 50% occurring online (Airlines: Passenger Check-in Methods 2018 | Statista, 2023). Chatbots offer a new online channel for check-in, with a more interactive interface that enables them to request check-in as they would do at a counter, but on the go, and in a much quicker option.

2.2 Chatbot as a Recovery Tool in Service Recovery

In the consumer service industry, including airline industry, it is important to have a recovery plan in place in order to ensure smooth operations when something goes wrong (Bendall-Lyon & Powers, 2001). Using a service recovery tool such as chatbot is an effective method to restore the consumers' confidence (Fotheringham & Wiles, 2022) and satisfactory level on the service provider, and with use of An Effective recovery tool will enable the service provider to take measures to restore the consumers' trust (Feine et al., 2019).

The airline industry is one of the most dynamic and challenging industries in the world. Due to its complex nature, it is prone to service failures that can have a significant impact on customers. Traditionally, customer service representative have been the primary means of addressing customer complaints and resolving service failures in airline industry. However, with the advancement of technology, chatbots have emerged as an effective tool for recovering from service failures.

In the current competitive market, customer service is essential for any business to stay afloat and be successful (Innis & La Londe, 1994). With the rise of

artificial intelligence, customer service is taking on a whole new form in the form of a Chatbot. Chatbot technology is quickly becoming one of the most popular customer service solutions available, particularly in the airline industry (Khan, 2017).

A Chatbot can provide a range of customer service solutions, but service recovery is one of the most important. Service recovery is the process of responding to customer complaints and seeking to make amends (Andreassen, 2000), and a Chatbot can help make service recovery more efficient and effective (Poser et al., 2021). By providing automated responses to customer queries and complaints, Chatbots can quickly and accurately identify issues and provide solutions. This helps to ensure that customers get the help they need in a timely manner, helping to restore customer loyalty and trust in the airline (Chen et al., 2023).

Chatbots can also be used to help prevent customer service issues before they arise. By leveraging AI-powered analytics, Chatbots can detect potential customer service issues and provide solutions before they become a problem (Yaeli & Zeltyn, 2021). This helps to ensure that customers receive the best possible service and that they feel heard and appreciated.

Moving on to the characteristics of a chatbot, one of the main advantages of chatbots is their ability to provide fast and immediate responses to customer inquiries. Unlike service agents who may be unavailable during certain times or require time to find a solution, chatbots are available 24/7 and can respond instantly. This is particularly important in the airline industry, where customers may need immediate assistance to resolve issues such as flight cancellations or delays.

Moreover, chatbots are programmed to provide consistent responses to customer inquiries. This means that customers will receive the same level of service

regardless of the time of day or the specific agent handling their inquiry. In contrast, service agents may provide inconsistent responses due to varying levels of training or experience. This consistency in service is crucial in the airline industry, where customers expect a high level of service and consistency.

Furthermore, while chatbots are consistent in their responses, they can also be personalized to meet the unique needs of individual customers. This is achieved through the use of data analytics and machine learning, which allows chatbots to understand customer preferences and tailor their responses accordingly. This level of personalization is difficult for service agents to achieve, as it requires in-depth knowledge of each customer's history and preferences.

Lastly, chatbots are more efficient than service agents in handling large volumes of inquiries. This is because chatbots can handle multiple inquiries simultaneously, whereas service agents can only handle one inquiry at a time. In the airline industry, this efficiency is essential during peak periods such as holidays, where there may be a surge in customer inquiries.

2.3 Service Failure

Customer is always the company’s top priority and without hesitation to company is targets to provide the best possible service (Sakinah, 2019). However, even though every service firm claims to provide great customer service, there will inevitably be times when service delivery falls short of a client's expectations. Such differences are known as service failures (McCollough et al., 2000), and they can result in a variety of unfavourable side effects for the business that caused them. Following a service failure, dissatisfaction with the service experience is typical, as are sentiments of resentment and a more general urge to engage in retaliatory acts, such as spreading bad word of mouth (Bonifield & Cole, 2007).

Given that different service failure will lead to different outcome and perception to the customer, this often varies between the severity level or the magnitude of the failure. In particular, the consumer will feel the exchange is unfair and unsatisfied as the extent of the loss resulting from a failure increases. Additionally, prior research (Sokhey et al., 1999) on how customers react to service failures leads one to believe that customer satisfaction levels decline with increasing scale or severity of service failure. Thus, there is solid evidence supporting the direct correlation between satisfaction and severity.

Expectation Disconfirmation Theory (EDT) is a customer satisfaction theory that states that customer satisfaction is determined by the difference between the customer's expectations and the actual performance of the product or service, illustrates how consumers form pleasure and continuation intentions by following a sequence of expectation formation, trial, and disconfirmation (Bhattacherjee & Premkumar, 2004). In the airline industry, expectation disconfirmation theory can be used to explain both mild service failure situations and severe service failure situations. By understanding the customer's expectations and the actual performance of the product or service, airlines can better understand how to improve customer satisfaction.

The severity of a service failure can significantly impact the degree of disconfirmation experienced by customers and the resulting customer satisfaction (Yüksel & Yüksel, 2008). It is crucial for companies to understand and manage customer expectations, monitor service quality, and provide prompt and effective service recovery to mitigate the negative impact of service failures on customer satisfaction and loyalty.

In the case of a mild service failure ,it typically involve minor problems that do not significantly impede the customer's experience. For example, a customer might have expected their flight to be on time but it was slightly delayed, customers may experience a slight negative disconfirmation in their expectations.

In this situation, the customer’s expectations have not been met, leading to a mild service failure. if the company responds quickly and appropriately to the problem, such as by offering an apology, compensation, or a timely resolution, the customer may still perceive the overall service as satisfactory or even better than expected. This can lead to a positive disconfirmation, which can increase customer loyalty and retention.

In contrast, severe service failure situations are more serious and can significantly impede the customer’s experience, which can result in a significant negative disconfirmation in the customer's expectations. For example, a customer might have expected their flight to arrive on time but the flight has been cancelled, which result in a significant negative disconfirmation in the customer's expectations. In this situation, the customer’s expectations have not been met and the customer’s satisfaction has been significantly diminished. This can lead to dissatisfaction, complaints, and even negative word-of-mouth communication. If the company fails to address the problem adequately or fails to offer an appropriate remedy, the customer may form a continuation intention to switch to a competitor or stop using the company's products or services altogether.

2.4 Chatbot Tonality

Tonality refers to the way in which service personnel communicate with customers during service recovery. It includes the language used, the tone of voice, and the overall attitude displayed towards the customer (Sundaram & Webster, 2000). According to research, a listener or receiver relies more on the tone of the voice than the message's actual substance when attempting to determine where the speaker or source falls on the contempt–affection continuum. This fact is made clear by Argyle et al.'s (1970) study, which discovered that listeners were able to infer the emotions represented in the message based just on the tone of the voice, even when the message's content was altered by random tape splicing. Therefore, a positive tonality can help to

mitigate the negative effects of a service failure, while a negative tonality can exacerbate them.

Chatbot tonality during service recovery is an important factor in the airline industry. A chatbot's tone of voice can have a significant impact on customer satisfaction and loyalty (Følstad et al., 2018). Customers expect to be treated with respect and kindness, regardless of the situation. If a chatbot is not properly programmed to use the right tone and language, it can create a negative experience, which may lead to customers feeling frustrated and dissatisfied.

A study conducted by the International Air Transport Association (IATA) has shown that a chatbot's tone of voice can significantly increase customer satisfaction during service recovery (Chatbots "will Have Key Role in Customer Service" | Airlines., 2017). For example, when customers are dealing with a delayed flight or a cancelled flight, using a polite, understanding, and helpful chatbot can help to reduce their stress and frustration. It can also help to make customers feel more valued, which can increase their willingness to continue using the airline.

The airline industry is highly competitive, and customers have many choices when it comes to which airline they choose to fly with. According to a PwC report, 82% of customers desire a customized experience when dealing with a business (PricewaterhouseCoopers, n.d.). As a result, chatbots must be designed to utilize the appropriate vocabulary and tone for each individual consumer depending on their experiences with the business in the past and their own preferences. A chatbot's tone of voice can help to differentiate an airline from its competitors and make it stand out. Furthermore, customers are more likely to be loyal to an airline that consistently provides them with a pleasant customer service experience (Jiang & Zhang, 2016), whereas chatbot's tone of voice can make a big difference in customer satisfaction and loyalty, and can help the airline to stand out from its competitors.

For example, imagine a customer whose flight has been cancelled due to weather conditions. If the airline representative they speak to on the phone adopts a sympathetic and apologetic tone, uses positive language, and offers a range of options to help the customer rebook their flight, the customer is more likely to feel understood and valued. According to a study by Temkin Group, customers who have a positive emotional experience with a company are 6.6 times more likely to forgive that company if it makes a mistake, compared to customers who have a negative emotional experience (The (Large) Connection Between Emotion and Loyalty, 2017). This highlights the importance of creating positive emotional experiences for customers, as it can not only increase their loyalty and likelihood to recommend the company, but also make them more forgiving in case of a mistake or service failure, and this positive tonality can help to rebuild the customer's trust in the airline and increase their likelihood of using their services again in the future.

Historically, chatbots have been used to communicate information in a serious and formal manner. But employing humour in chatbot conversations can humanize the dialogue, increase comfort for the users, and boost engagement (Følstad & Brandtzaeg, 2017) . For instance, online retailer ASOS introduced a chatbot on Facebook Messenger in 2017 that engaged customers in a humorous and conversational interaction (Gilliland, 2018). The chatbot provided amusing and entertaining responses to client questions in the form of GIFs and jokes. Customers expressed their gratitude for the chatbot's lively and engaging attitude, as well as for its amusing tone, which was well welcomed.

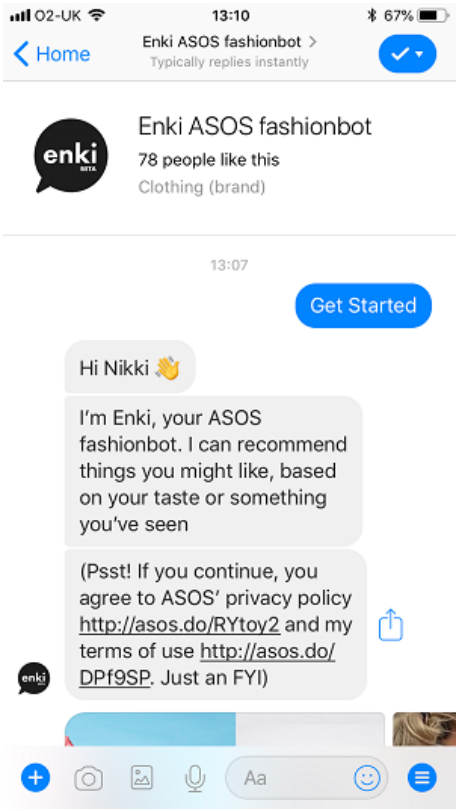


Figure 2-1
Enki greeting in a humours tonality

According to data revealed, if a brand employs humour, 82% of customers are more likely to buy from it again, 81% of customers are more likely to suggest it to family and friends, 76% of customers prefer the brand over the competition, and 67% of customers spend more money with the brand (Study: Humour in Ads a Must, yet APAC Biz Leaders Remain Hesitant, 2022). However, it's important to note that using humour in chatbot interactions requires careful consideration and strategy. Humour can be subjective and what may be funny to one customer may not be to another. Additionally, humour should be used appropriately and not in situations where it may be perceived as insensitive or inappropriate.

Emotional Contagion Theory is a psychological theory that suggests that emotions can be transferred from one person to another through nonverbal cues, mimicry, and empathic responses (Hsee et al., 1990). It proposes that individuals can "catch" emotions from others, leading to similar emotional experiences. In the context of the impact of tonality on customer re-patronage intention during service failure in the airline industry, Emotional Contagion Theory provides valuable insights.

2.5 Theoretical Support for Research

According to Emotional Contagion Theory, when individuals interact with others, they unconsciously mimic facial expressions, body language, and vocal tones, which can trigger the activation of similar emotions within themselves. This theory suggests that emotions are contagious and can spread from service providers to customers during service recovery interactions (Hennig-Thurau et al., 2006).

In the context of tonality, the use of humour or sincerity by service providers can evoke positive emotions in customers. For example, a humorous tone can elicit laughter and create a positive emotional state, while a sincere tone can convey empathy and understanding, generating feelings of comfort and reassurance. As customers are exposed to these positive tonalities, they may experience emotional contagion, resulting in a similar positive emotional state, which is also called the ripple effect (Barsade, 2002).

When customers experience positive emotions during service recovery, it can have several implications. Firstly, positive emotions can enhance customer satisfaction and overall evaluation of the service encounter. Customers who feel positive emotions are more likely to perceive the service recovery as effective and satisfactory, leading to increased re-patronage intention.

Secondly, positive emotions can influence customers' perceptions of the service provider and the airline brand. When customers have positive emotional experiences during service recovery, they may form positive associations with the service provider and perceive them as caring, competent, and trustworthy. This, in turn, can strengthen their loyalty and increase their likelihood of re-patronage.

Furthermore, emotional contagion can extend beyond the individual customer. Positive emotions experienced by customers during service recovery can

influence their subsequent interactions with others, including their friends, family, and social network (Verduyn et al., 2017). They may share their positive experiences and recommendations, leading to positive word-of-mouth and potentially attracting new customers to the airline.

2.6 Hypothesis Development

According to Affective Events Theory (AET), a theory in psychology that suggests that emotions can have a significant impact on the way people react to events in their daily lives, including events that occur in the workplace (Weiss & Cropanzano, 1996). Events that trigger emotions can have both immediate and long-term effects on individuals.

This theory proposes that events trigger emotional responses, which, in turn, influence individuals' satisfaction level, motivation, and performance. In the context of using humour tonality in service failure, AET can explain the impact of humour in mild service failures but may not be as applicable in severe service failures.

Considering in a mild service failure, where the negative impact on customers is relatively low, humour tonality can play a crucial role in shaping the emotional response of both customers and service providers. AET suggests that positive emotions, such as laughter and amusement can counteract negative emotions and contribute to an overall positive affective state. Humour has the potential to create a pleasant and engaging experience for customers, leading to increased satisfaction and positive word-of-mouth. For service providers, utilizing humour can help alleviate stress and negative emotions, leading to a positive outcome with higher re-patronage intention.

However, in severe service failures, the emotional impact on customers is much more significant. Customers experiencing severe failures may be frustrated,

disappointed, or even angry. In such cases, the use of humour tonality may be perceived as inappropriate or insensitive, failing to address customers' emotional needs and concerns. AET suggests that during severe service failure, individuals are more likely to experience intense negative emotions, and attempts to use humour may not effectively alleviate or override these negative emotions. Instead, sincerity and empathy become more critical in conveying understanding and addressing customers' emotions.

The following hypotheses have been developed in light of using AET:

> *H1: In the context of mild service failure, utilizing humour tonality in communication will result in higher consumer re-patronage intention, compared to using professional or sincere tonalities.*

According to Service Recovery Paradox (SRP), when a business successfully recovers from a service failure, the customer paradoxically has a better experience than they would have otherwise (McCollough & Bharadwaj, 1992). SRP suggests that when service failures occur and are effectively resolved, customers may develop a higher level of satisfaction and loyalty compared to if no failure had occurred. In this context, sincere tonality is often considered the best tonality compared to professional or humour tonality.

The key differences between humour, sincerity, and professional tonality lie in their underlying communication styles and intended effects on the recipient.

Humour tonality aims to create a light-hearted and enjoyable atmosphere. It can help alleviate tension, build rapport, and create a positive emotional experience for customers. However, in the context of service recovery, using humour tonality may be perceived as inappropriate or insincere, especially during severe service failures. Customers experiencing significant problems may not find humour amusing or relevant to their concerns, potentially leading to further dissatisfaction.

On the other hand, professional tonality focuses on maintaining a formal and business-like communication style. It emphasizes to demonstrate competence, reliability, and adherence to service standards. It aims to address the customer's needs efficiently and effectively. While professional tonality is essential in certain situations, it may lack the personal touch and empathy that customers seek during service recovery. Customers may feel that their emotional needs are not adequately addressed, leading to reduced satisfaction and lower re-patronage intention.

For sincere tonality, characterized by empathy, understanding, and genuine concern, is often the most effective tonality in service recovery. It acknowledges customers' emotions and validates their experiences, demonstrating a commitment to resolving the issue and rebuilding trust. Sincere tonality shows empathy and helps create a personal connection between service providers and customers. It reassures customers that their concerns are heard, valued, and will be resolved appropriately. This emotional support and personalized approach can significantly impact customers' perceptions of the service recovery process, leading to increased satisfaction and re-patronage intention.

Based on the paradox described above, the second hypotheses to be tested outlined as:

> *H2: In the context of severe service failure, utilizing sincere tonality in communication will result in higher consumer re-patronage intention, compared to using professional or humour tonalities.*

Subject to Social Identity Theory (SIT), a psychological theory that suggests that a person's sense of self is derived, in part, from the groups or categories that they belong to, where people are motivated to maintain a positive sense of self (Tajfel & Turner, 1979). This means that people are more likely to identify with groups that they perceive as having positive qualities or characteristics, and they may

distance themselves from groups that are perceived as negative. While being a service provider we have limited access on customer's self-concept from the groups to which they belong. Using a professional tone during service recovery can signal that the service provider is a member of a professional group with the ability to provide service professionally during service failure that can cater all customers from different social groups.

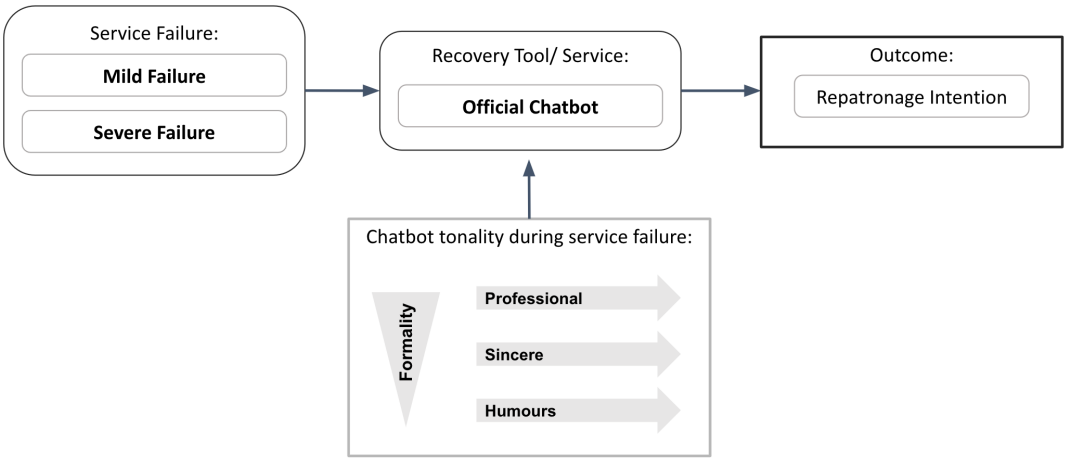
Adding on with Attribution Theory, a social psychology theory that explains how people make judgments about the causes of others' behavior, such as consistency, distinctiveness, and consensus (Weiner, 1985). During service failure, customers will form attributions about the cause of service failures and that these attributions can impact their emotions and behaviors. If the chatbot solely use a professional with an impersonal language and tonality during the service recovery process, it might form negative attributions about the service provider's motives or competence, which can lead to negative emotions and lower customer's re-patronage intention.

Based on SIT and Attribution Theory demonstrated above, the third hypotheses to be tested is:

> *H3:In the context of both mild and severe service failures, although professional tonality can be utilized during service recovery, it will result in comparatively lower re-patronage intention than adopting sincere or humour tonalities.*

Figure 2-3

Conceptual framework



CHAPTER THREE RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

The research object for this study will be potential future airline customers who are looking to have a better customer service in the future and past customers who have experienced a service failure in previous flight experience.

Customers who experience a service failure are more likely to switch to a competitor airline or stop using airline services altogether. Therefore, understanding the impact of chatbot tonality on customer re-patronage intention is crucial for airlines to improve their customer service and retain customers.

This study recruited a sample of 414 potential airline customers and customers who have experienced a service failure or enthusiast in airline industry. The sample could be drawn from a range of age groups, genders, and socioeconomic backgrounds to ensure a diverse and representative sample. While nearly everyone could be a potential future airline customer, simple random sampling will be used in this research, providing each individual an equal probability to be chosen.

Experimental design was used in this research. Under experimental design, we are able to carefully control the variables that may affect the outcome of the study, which can help eliminate extraneous factors and increase the reliability and validity of the results. As we are looking to focus on the tonality of chatbot in this research, by conducting an experimental design we could control the whole experience and journey for what will our subject receive and how will they go through the experiment, which can assist in aligning to our research objectives and data collection afterwards.

3.2 Methodology

This study is experimental research with 2x3 factorial design, the hypothesis is tested by t-test and two-way ANOVA test. Two-way ANOVA test is a statistical technique used to determine the relationship between two categorical independent variables and a continuous dependent variable.

In this two-way ANOVA test, the data is grouped by different tonality. The goal of the test is to determine whether the means of the dependent variable differ significantly between the different combinations of the two factors. We will be studying the effect of different types of tonality and two different severity levels service failure. We would measure the severity level of service failure as our dependent variable, and we would group the data based on both the types of tonality.

The two-way ANOVA test will calculate whether there is a significant difference in the means of the dependent variable between the tonality. It does this by calculating the F-statistic, which measures the ratio of variance between the groups to the variance within the groups. P-value and degree will be found in this test as well.

If the F-statistic is larger than the critical value, we can conclude that there is a significant difference between at least one of the combinations of the two factors. If the F-statistic is smaller than the critical value, we cannot conclude that there

is a significant difference.

If an ANOVA produces a p-value that is less than our significance level, post-hoc Tests will be performed too. If there are significant main effects or interactions, conduct post-hoc tests to determine which groups differ significantly from each other.

Data Analysis Toolpak in Excel will be the tool to analyse this experiment.

3.3 Data Collection

The data for this study was collected through a travel agency-like website with a chatbot for participants to interact. This experiment was designed to capture their perceptions of chatbot tonality during the service recovery process and its impact on their re-patronage intention.

Platform. An airline-like website with a chatbot installed. The website is created in Weebly, under its domain. The chatbot will be written in GoBot, then encrypt to the website. Different tonality chatbots will be created into different webpage in the website, where these webpage will not be found in the main page of the website, participants will be assigned to the webpage randomly, and the webpage link will be provided privately.

Procedure. Participant will be asked to look for the chatbot in the website with a randomly assigned a service failure situation. Participant have to interact with the chatbot with pre-set answers and questions. After this stimulation, participants will be asked to fill in a questionnaire based on the experience with the chatbot. Google form will be used to support data collection as a questionnaire service providing platform.

Data Collection. This study will use a questionnaire to gather data on customers'

perceptions of the chatbot's tonality and their re-patronage intention. The survey will include questions such as how the chatbot's tone of voice made them feel during the service recovery process, their level of satisfaction with the chatbot's responses, and whether they would use the airline's services again in the future.

To ensure a diverse and representative sample, a purposive sampling technique was employed. Participants were recruited from various online forums and social media groups dedicated to air travel experiences, and travelers and workers at the Hong Kong International Airport. The survey was distributed using a direct approach to participants and voluntary participation on online platforms.

In total, 414 people have agreed to participate in the study and completed the online experiment. The response rate was approximately 100%, which is considered satisfactory for this type of research. The sample consisted spanning a range of age groups, genders, and travel frequency.

The online survey was designed using a combination of standardized 7-Likert scales (Taherdoost, 2019). The first section of the survey confirmed the participants have completed the experiment before starting the survey. Participants were then asked for their re-patronage intention after interacting with the chatbot. In total 6 questions related to re-patronage intention were used. For each questions, participants were asked to rate their re-patronage intention on a Likert scale ranging from 1 (positive) to 7 (negative).

The third section gathered demographic information such as age, gender, and frequency of air travel.

To ensure the integrity and confidentiality of the collected data, participants' responses were anonymous, and strict data protection protocols were followed throughout the data collection process. Ethical considerations were carefully

addressed, and participants were informed about the voluntary nature of their participation and their rights to withdraw at any time.

For limitation, artificiality will be take into consideration in this experiment. As this experimental study involve artificial or contrived situations especially on the chatbot's tone of voice and the fabricate service failure, which may not accurately reflect real-world conditions. Participants may behave differently in experimental settings than they would in their natural environment, which can impact the validity of the results.

External validity may be a concern in this experiment. The results of this experimental study may not generalize to other service failure situation, environment, or cultural background or other specific conditions beyond this experiment.

With the total sample size of 414 participant, the sample size of an experimental study is possible to bring limitations to the validity of the results. A small sample size will be more feasible and practical in this research, however is may bring limitation in providing inadequate statistical power to detect meaningful effects comparing to other large scale research.

Participants may have demand characteristics such as social desirability bias and social norms that may affect the validity of the results, behaving differently if they believe they are being observed or if they know the purpose of the study.

By considering the potential limitation listed above, the least information will be disclosed to the participants in this experiment to produce valid and reliable results.

CHAPTER FOUR RESEARCH RESULT

4.1 Characteristics of Respondents

The sample for this study consisted of 414 participants. The participants were recruited using a purposive sampling technique from various online forums and social media groups, and users of Hong Kong International Airport. The goal was to ensure a diverse and representative sample that encompassed different demographics and travel experiences.

The data provided captures information about the frequency of plane travel, gender, and age of the respondents. A total of 414 individuals participated in the survey, and their responses provide insights into their travel patterns, gender distribution, and age distribution.

Regarding the frequency of plane travel, the respondents were asked to indicate how frequently they travel by planes. The data shows that there were no respondents who indicated that they never travel by planes. The majority of the respondents (163 individuals) reported that they travel occasionally, less than once per year. This group represents individuals who do not travel by plane frequently or have only travelled by plane on rare occasions.

Another group of respondents (114 individuals) reported that they travel sometimes, at least once per year. This group represents individuals who travel by plane on an annual basis but not frequently.

Additionally, 105 respondents stated that they travel often, with 2 to 3 trips per year. This group represents individuals who have a moderate level of plane travel, taking multiple trips per year but not as frequently as some other groups.

A smaller group of respondents (32 individuals) reported that they always travel by plane, with 4 or more trips per year. This group represents individuals who are frequent flyers and rely heavily on air travel for their transportation needs.

Table 4-1

The characteristics of respondents – travel frequency (n=414)

How frequently do you travel by planes?	Sample Size	Valid Percentage
Never	0	0
Occasionally - Less than once per year	163	39%
Sometimes - At least once per year	114	28%
Often - 2 to 3 trips per year	105	25%
Always - 4 times or above	32	8%

In terms of gender, the data indicates that out of the 414 respondents, 200 identified as female and 214 identified as male. No respondents chose the option of prefer not to say, indicating a willingness to disclose their gender.

In terms of gender, the sample consisted of both male and female participants, providing a balanced representation of perspectives. This allowed for a comprehensive analysis of the impact of chatbot tonality on customer re-patronage intention from a gender perspective.

Table 4-2

The characteristics of respondents – gender (n=414)

Gender	Sample Size	Valid Percentage
Female	200	48%
Male	214	52%
Prefer not to say	0	0%

The data also provides information about the age distribution of the respondents. The breakdown of respondents by age groups is as follows: 52 respondents were 18 years old or below, 95 respondents were between the ages of 19 and 30, 106 respondents were between the ages of 31 and 40, 109 respondents were between

the ages of 41 and 50, 30 respondents were between the ages of 51 and 60, and 22 respondents were 61 years old or above.

Table 4-3

The characteristics of respondents – age (n=414)

Age	Sample size	Valid Percentage
18 or below	52	13%
19 to 30	95	23%
31 to 40	106	26%
41 to 50	109	26%
51 to 60	30	7%
61 or above	22	5%

4.2 Descriptive Statistic and Reliability Test

The descriptive statistics for the data indicates the frequency distribution of respondents' travel patterns, gender distribution, and age distribution. The majority of respondents (39%) indicated that they travel occasionally, less than once per year, while 28% reported traveling sometimes, at least once per year. Regarding gender, 48% of respondents identified as female, and 52% identified as male. In terms of age distribution, the highest proportion of respondents fell within the 31 to 40 age group (26%), followed closely by the 41 to 50 age group (26%). The data provides a snapshot of the characteristics of the respondents and serves as a foundation for further analysis.

Reliability analysis will be used in the research. It is a statistical technique used to assess the consistency and stability of measurements or scales. It helps researchers determine the extent to which a measure or instrument produces consistent and dependable results (Armor, 1973). Reliability analysis evaluates the internal consistency of items within a scale or questionnaire, measuring the extent to which items in the scale are correlated and reliably measure the same construct. It is an essential step in ensuring the reliability and validity of research measures.

A Cronbach's α coefficient greater than 0.8 is considered to have high reliability, while 0.6-0.8 is the minimum acceptable reliability standard (Creswell, 2009). In this study, Cronbach's α coefficient (>0.7) will be used to measure the reliability of each scale.

Table 4-4

Reliability test for experiment results

Level of Severity	**Tonality**	**Mean**	**Standard Deviation**	**Cronbach Alpha**
Mild	Sincere	3.2	0.68	0.77
Mild	Professional	3.51	1.2	0.82
Mild	Humour	1.65	0.41	0.89
Severe	Sincere	1.72	0.44	0.88
Severe	Professional	2.71	0.66	0.72
Severe	Humour	2.13	0.5	0.80

Cronbach's α coefficients were calculated for six sets of questionnaires categorized into mild and severe service failures, and three types of tonality: sincere, professional, and humour.

Based on the coefficients in table 4-4, it can be observed that the questionnaire sets generally exhibit satisfactory levels of internal consistency. All coefficients fall within the acceptable range, with values closer to 1 indicating higher internal consistency.

For the mild service failure, the Cronbach's α coefficients for sincere, professional, and humour tonality are 0.77, 0.82, and 0.89, respectively. These coefficients suggest that the questionnaire sets in all three tonalities demonstrate good internal consistency in measuring the intended construct within the context of mild service failures.

Similarly, for the severe service failure category, the Cronbach's α coefficients for sincere, professional, and humour tonality are 0.88, 0.72, and 0.80, respectively. These coefficients also indicate acceptable levels of internal consistency in measuring the intended construct within the context of severe service failures.

Therefore, the reliability of the questionnaire in this study is consistent and stable as shown in the results.

4.3 Hypothesis Testing

Analysis of Mild Service Failure

We used the independent t-test (two-sample t-test) and performed two-tailed t-test to compare the variables.

In mild service failure, humours vs sincere tonality and humours vs professional tonality will be tested.

Table 4-5

In mild service failure, t-test of Humour vs Sincere

Tonality	Mean	Standard Deviation	P-Value	T-Value
Humour	1.65	0.41	5.13 x 10^(-16)	16.5
Sincere	3.2	0.68		

Humours vs sincere tonality. For humorous tonality, the mean (M) score is 1.65 with a standard deviation (SD) of 0.41. On the other hand, for sincere tonality, the mean (M) score is 3.2 with a standard deviation (SD) of 0.68.

The t-value for the comparison between "humorous tonality" and "sincere tonality" is 16.5. This indicates a substantial difference between the means of the

two groups. The p-value is reported as 5.13 x 10^(-16), which is an extremely small value. The small p-value suggests strong evidence against the null hypothesis and indicates that the difference between the two groups is statistically significant.

Table 4-6

In mild service failure, t-test of Humour vs Professional

Tonality	**Mean**	**Standard Deviation**	**P-Value**	**T-Value**
Humour	1.65	0.41	2.52x10^(-19)	11.91
Professional	3.51	1.2		

Humours vs professional tonality. In contrast, for professional tonality, the mean (M) score is 3.51 with a standard deviation (SD) of 1.2.

The t-value for the comparison between "humorous tonality" and "professional tonality" is 11.91. This suggests a considerable difference between the means of the two groups. The p-value is reported as 2.52x10^(-19), which is an extremely small value. The small p-value indicates strong evidence against the null hypothesis and suggests that the difference between the two groups is statistically significant.

In summary, as both situation suggests a strong evidence against the null hypothesis and indicates a statistically significant difference between the two groups, **hypothesis 1 was supported**.

Analysis of Severe Service Failure

In severe service failure, sincere vs professional tonality and sincere vs humours tonality will be tested.

Table 4-7

In severe service failure, t-test of Sincere vs Professional

Tonality	Mean	Standard Deviation	P-Value	T-Value
Sincere	1.72	0.44	2.08x10^(-17)	-10.07
Professional	2.71	0.66		

Sincere vs professional tonality. For sincere tonality, the mean (M) score is 1.72 with a standard deviation (SD) of 0.44. On the other hand, for professional tonality, the mean (M) score is 2.71 with a standard deviation (SD) of 0.66.

The t-value for the comparison between "sincere tonality" and "professional tonality" is -10.07. This negative value signifies that the mean score of the "sincere tonality" group is lower than the mean score of the "professional tonality" group. The p-value is reported as 2.08x10^(-17), which is an extremely small value. The small p-value suggests strong evidence against the null hypothesis, indicating that the difference between the two groups is statistically significant.

Table 4-8

In severe service failure, t-test of Sincere vs Humour

Tonality	Mean	Standard Deviation	P-Value	T-Value
Sincere	1.72	0.44	1.08x10^(-6)	-5.11
Humour	2.13	0.5		

Sincere vs humours tonality. For sincere tonality, the mean (M) score is 1.72 with a standard deviation (SD) of 0.44. On the other hand, for humorous tonality, the mean (M) score is 2.13 with a standard deviation (SD) of 0.5.

The t-value for the comparison between "sincere tonality" and "humorous tonality" is -5.11. The negative t-value indicates that the mean score of the "sincere tonality" group is lower than the mean score of the "humorous tonality" group. The p-value is reported as 1.08x10^(-6), which is an extremely small value. The small p-value suggests strong evidence against the null hypothesis, indicating that the difference between the two groups is statistically significant.

In summary, as both situation suggests a strong evidence against the null hypothesis and indicates a statistically significant difference between the two groups, **hypothesis 2 was supported**.

Analysis of Mild and Severe Service Failure

By using Two-Way Factor ANOVA test, examining the impact of two factors, namely "Mild" and "Severe," on the three tonalities: "Sincere," "Professional," and "Humour." The ANOVA test provides a summary of the results.

Based on the ANOVA results, all three sources of variation (Sample, Columns, and Interaction) have statistically significant effects on the tonalities. The p-values for all three factors are extremely small, indicating strong evidence against the null hypothesis. This suggests that both the factors (Mild and Severe) and their interaction have a significant impact on the tonalities.

From the ANOVA results, we can see that the average of professional tonality in mild and severe is 3.51 and 2.71 respectively, which indicates that professional tonality is the worst performing tonality, thus, **hypothesis 3 was supported**.

Table 4-4

Two-way ANOVA Test

Anova: Two-Factor With Replication						
SUMMARY	Sincere	Professional	Humour	Total		
Mild						
Count	69.00	69.00	69.00	207.00		
Sum	220.50	242.17	113.67	576.33		
Average	3.20	3.51	1.65	2.78		
Variance	0.46	1.43	0.17	1.35		
Severe						
Count	69.00	69.00	69.00	207.00		
Sum	118.50	186.83	146.67	452.00		
Average	1.72	2.71	2.13	2.18		
Variance	0.19	0.44	0.25	0.46		
Total						
Count	138.00	138.00	138.00			
Sum	339.00	429.00	260.33			
Average	2.46	3.11	1.89			
Variance	0.88	1.09	0.26			
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Sample	37.34	1.00	37.34	76.12	6.86502E-17	3.86
Columns	103.23	2.00	51.61	105.22	1.41157E-37	3.02
Interaction	68.13	2.00	34.06	69.44	1.10521E-26	3.02
Within	200.14	408.00	0.49			
Total	408.84	413.00				

*Remarks: * $p < 0.05$*

Summary of Hypothesis Result

The results of the hypothesis testing provide support for all three hypotheses in the context of service failure and tonality in communication.

In summary, the study's findings highlight the importance of tailoring tonality in communication during service recovery based on the severity of the failure. Humour tonality can be effective in mild failures, while sincere tonality is more suitable for severe failures. Professional tonality, although acceptable, may not be as effective as sincere or humour tonalities in maintaining customer re-patronage intention. These findings have practical implications for service providers in the airline industry to enhance their service recovery strategies and improve customer satisfaction and loyalty.

Hypothesis		Result
H1	H1: In the context of mild service failure, utilizing humour tonality in communication will result in higher consumer re-patronage intention, compared to using professional or sincere tonalities.	Supported
H2	H2: In the context of severe service failure, utilizing sincere tonality in communication will result in higher consumer re-patronage intention, compared to using professional or humour tonalities.	Supported
H3	H3: In the context of both mild and severe service failures, although professional tonality can be utilized during service recovery, it will result in comparatively lower re-patronage intention than adopting sincere or humour tonalities.	Supported

CHAPTER FIVE GENERAL DISCUSSION AND SUGGESTIONS

5.1 General Discussion

The findings of this research shed light on the importance of tonality in service recovery and its impact on customer re-patronage intention in the airline industry. The study examined the effects of different tonalities, including humour, sincerity, and professionalism, in the context of mild and severe service failures. The results supported the hypotheses, providing meaningful insights for both researchers and practitioners.

The research highlights the significance of adopting the appropriate tonality based on the severity of the service failure. In mild service failures, utilizing humour tonality was found to positively influence customer re-patronage intention. Humour has the potential to create a positive and engaging experience for customers, leading to increased satisfaction and loyalty (Hollebeek, 2011). On the other hand, in severe service failures, sincere tonality emerged as the most effective in eliciting higher re-patronage intention. Sincerity helps convey empathy, understanding, and a genuine concern for customers, which is crucial in restoring customer confidence and rebuilding trust (Tsarenko et al., 2018).

These findings have several important implications for both researchers and managers in the airline industry. From a research perspective, this study contributes to the existing literature by providing empirical evidence on the impact of tonality on customer re-patronage intention during service recovery. It adds to our understanding of the role of emotions and communication strategies in customer responses and behavior.

From a managerial standpoint, the findings offer actionable insights for service providers in the airline industry. Managers should recognize the power of

tonality in shaping customer perceptions and experiences. By training and empowering employees, including chatbots and customer service representatives to effectively use humour and sincerity during service recovery, organizations can enhance the overall service experience and increase customer satisfaction and loyalty.

Furthermore, the study suggests that tonality can be a key differentiating factor among airlines. Service providers that consistently employ the appropriate tonality have the potential to stand out from competitors. Developing a distinct tonal style aligned with the brand image and customer expectations can contribute to a positive and memorable customer experience (Barlow & Stewart, 2004). This, in turn, can lead to increased customer loyalty and a competitive advantage in the industry.

5.2 Theoretical Contribution

H1-H3 are consistent with and support the previous theoretical findings, which holds significant research value in the context of customer service and technology-driven service recovery. This research aims to explore the influence of tonality, specifically in the context of intelligence chatbots, on customer re-patronage intention during mild and severe service failures in the airline industry. By investigating the impact of tonality on customer responses and behaviors, this research contributes to the understanding of effective service recovery strategies and the role of technology in enhancing customer experiences.

One of the key differences between this research and previous academic research lies in the focus on intelligence chatbots. While previous studies have examined the impact of tonality in service recovery, this research specifically targets chatbot interactions. With the increasing adoption of chatbots in customer service, understanding the influence of tonality in this context is crucial for service providers. Therefore, this research provides insights into the unique

dynamics of human-computer interactions and their effects on customer responses.

Furthermore, this research explores the differential impact of tonality during mild and severe service failures. Previous studies have primarily focused on general service recovery scenarios without distinguishing between different levels of service failures. This research fills the gap by investigating the specific effects of tonality in mild and severe service failures separately. Understanding the differential impact of tonality in these contexts can help service providers tailor their service recovery strategies more effectively.

Moreover, the research topic highlights the importance of re-patronage intention, which is a key outcome variable in customer behaviour research. By examining the influence of tonality on customer re-patronage intention, this research addresses a critical aspect of customer loyalty and long-term business success. Previous studies have investigated various factors influencing customer re-patronage intention, but the specific focus on tonality in the context of service recovery and chatbot interactions adds a novel perspective to the existing literature.

5.3 Managerial Implication

It is important for airline managers to understand the power of emotional contagion and its impact on customer re-patronage intention. By recognizing the influence of tonality on emotional contagion, managers can train their service providers to adopt appropriate tonalities, such as humour or sincerity, during service recovery interactions. This can help create positive emotional experiences for customers, enhance their re-patronage intention, and contribute to the overall success of the airline.

Customer Perspective. From the customer's perspective, the research findings highlight the importance of adopting appropriate tonality during service recovery.

Service providers should consider utilizing humour tonality in mild service failures to create a positive and engaging experience for customers. On the other hand, in severe service failures, a sincere tonality is crucial to convey empathy and understanding. This approach can help restore customer confidence and increase re-patronage intention. Managers should ensure that employees, including chatbots or customer service representatives, are trained to use the right tonality based on the severity of the failure to effectively address customer needs and emotions.

Service Recovery Strategies. The research findings have implications for service recovery strategies within the airline industry. Service providers should incorporate humour and sincerity as key components of their service recovery protocols. This can involve designing chatbot scripts, customer service guidelines, and training materials that explicitly emphasize the appropriate use of humour and sincerity. Implementing standardized procedures can ensure consistency in tonality across different customer touchpoints. Additionally, service recovery processes should be tailored to different levels of service failures, with the tonality aligned accordingly. Managers should regularly review and refine their service recovery strategies based on customer feedback and emerging trends to ensure their effectiveness.

Differentiation and Competitive Advantage. The findings suggest that tonality can be a differentiating factor among airlines. Service providers that consistently employ the right tonality, whether humorous or sincere, have the potential to stand out from competitors. By offering a personalized and empathetic service recovery experience, airlines can enhance their brand image, build customer trust, and foster long-term loyalty. Managers should view tonality as a strategic element in their overall customer experience strategy and actively seek ways to leverage it as a competitive advantage.

Technological Advancements. In an era of increasing reliance on technology, the research findings emphasize the importance of developing and enhancing chatbot capabilities. Managers should collaborate with technology teams to refine and upgrade chatbots with the ability to understand and respond with appropriate tonality. Natural language processing (NLP) algorithms can be improved to detect and adapt to the emotional context of customer interactions. This ensures that chatbots effectively convey humour or sincerity during service recovery, thereby enhancing customer experiences. Regular monitoring and evaluation of chatbot performance can help identify areas for improvement and ensure that the tonality is aligned with customer expectations.

5.4 Limitations and Future Research

Multichannel Approach in Real Life: Given the increasing prevalence of digital channels in customer service and limitation of AI, multichannel communications are often used in real life, where this research has limited the problem solving tool to be solely a chatbot. Future research could investigate how tonality translates across different communication channels, such as chatbots, social media, or email. Understanding the nuances of tonality in different channels and its impact on customer perceptions and re-patronage intention would be valuable for organizations aiming to deliver consistent and effective service experiences.

Mediating Mechanisms. This research focus on tonality as the only factor of affecting humans emotion. Future research could explore the underlying psychological mechanisms through which tonality or other factors that influences customer re-patronage intention. For example, investigating the role of emotions, perceived empathy, or trust as mediators in the relationship between tonality and customer responses could provide valuable insights into the process by which tonality affects customer behaviour.

Managerial Interventions. Chatbots as a recovery tool has no managerial intervention during the whole process and the company structure or decision making process is not considered. Future research could explore practical interventions that managers can implement to enhance the effective use of tonality during service recovery. For instance, investigating the impact of training programs, guidelines, or scripts on employee tonality and customer responses could offer actionable recommendations for service providers.

REFERENCES

25 chatbot statistics for 2020 that you need to know. (2020). Medium. https://chatbotsmagazine.com/25-chatbot-statistics-for-2020-that-you-need-to-know-292ccbe04d35

Airlines: passenger check-in methods 2018 | Statista. (2023, February 3). Statista. https://www.statista.com/statistics/493957/check-in-method-airline-passengers/

Andreassen, T. W. (2000). Antecedents to satisfaction with service recovery. *European Journal of Marketing*, *34*(1/2), 156–175. https://doi.org/10.1108/03090560010306269

Argyle, M., Salter, V., Nicholson, H., Williams, M., & Burgess, P. (1970). The Communication of Inferior and Superior Attitudes by Verbal and Non-verbal Signals*. *The British Journal of Social and Clinical Psychology*, *9*(3), 222–231. https://doi.org/10.1111/j.2044-8260.1970.tb00668.x

Armor, D. J. (1973). Theta Reliability and Factor Scaling. *Sociological Methodology*, *5*, 17. https://doi.org/10.2307/270831

Barlow, J., & Stewart, P. M. (2004). *Branded Customer Service: The New Competitive Edge*. http://ci.nii.ac.jp/ncid/BA73329055

Barsade, S. G. (2002). The Ripple Effect: Emotional Contagion and its Influence on Group Behavior. *Administrative Science Quarterly*, *47*(4), 644–675. https://doi.org/10.2307/3094912

Bendall-Lyon, D., & Powers, T. R. (2001). The Role of Complaint Management in the Service Recovery Process. *The Joint Commission Journal on Quality Improvement*, *27*(5), 278–286. https://doi.org/10.1016/s1070-3241(01)27024-2

Bhattacherjee, A., & Premkumar, G. (2004). Understanding Changes in Belief and Attitude toward Information Technology Usage: A Theoretical Model and Longitudinal Test. *Management Information Systems Quarterly*, *28*(2), 229. https://doi.org/10.2307/25148634

Bonifield, C. M., & Cole, C. H. (2007). Affective responses to service failure: Anger, regret, and retaliatory versus conciliatory responses. *Marketing Letters*, *18*(1–2), 85–99. https://doi.org/10.1007/s11002-006-9006-6

BOTfriends. (2022, December 22). *Tonality of chatbots | Definition and explanation - BOTwiki*. https://botfriends.de/en/blog/botwiki/tonality/

Chatbot Conversations to deliver $8 billion in Cost savings by 2022. (2017, July). https://www.juniperresearch.com/resources/analystxpress/july-2017/chatbot-conversations-to-deliver-8bn-cost-saving

Chatbot Market Size Worth $27,297.2 Million By 2030. (2023, March). https://www.grandviewresearch.com/press-release/global-chatbot-market

Chatbots "will have key role in customer service" | Airlines. (2017, July 31). https://airlines.iata.org/news/chatbots-will-have-key-role-in-customer-service

Chen, Q., Lu, Y., Gong, Y., & Xiong, J. (2023). Can AI chatbots help retain customers? Impact of AI service quality on customer loyalty. *Internet Research*. https://doi.org/10.1108/intr-09-2021-0686

Creswell, J. W. (2009). Research design: Qualitative, quantitative, and mixed methods approaches, 3rd ed. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches, 3rd Ed.* https://psycnet.apa.org/record/2008-13604-000

De Keyser, A., Köcher, S., Nasr, L., Verbeeck, C., & Kandampully, J. (2019). Frontline Service Technology infusion: conceptual archetypes and future research directions. *Journal of Service Management*, *30*(1), 156–183. https://doi.org/10.1108/josm-03-2018-0082

Delta to launch chat feature, enhanced meetings options for corporate travelers | Delta News Hub. (2022, March 16). Delta News Hub. https://news.delta.com/delta-launch-chat-feature-enhanced-meetings-options-corporate-travelers

Feine, J., Morana, S., & Gnewuch, U. (2019). Measuring Service Encounter Satisfaction with Customer Service Chatbots using Sentiment Analysis. *Wirtschaftsinformatik Und Angewandte Informatik*, 1115–1129.

https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1248&context=wi2019

Følstad, A., & Brandtzaeg, P. (2017). Chatbots and the new world of HCI. *Interactions*, *24*(4), 38–42. https://doi.org/10.1145/3085558

Følstad, A., Nordheim, C. B., & Bjørkli, C. A. (2018). What Makes Users Trust a Chatbot for Customer Service? An Exploratory Interview Study. *Springer eBooks*, 194–208. https://doi.org/10.1007/978-3-030-01437-7_16

Fotheringham, D., & Wiles, M. V. (2022). The effect of implementing chatbot customer service on stock returns: an event study analysis. *Journal of the Academy of Marketing Science*. https://doi.org/10.1007/s11747-022-00841-2

Franco, H. (2022). 8 Airline Chatbot Use Cases You'll Want to Implement. *Inbenta*. https://www.inbenta.com/en/blog/8-airline-chatbot-use-cases-youll-want-to-implement/

Gilliland, N. (2018, September 7). *Why ASOS' Enki has set the bar for retail chatbots*. Econsultancy. https://econsultancy.com/why-asos-enki-has-set-the-bar-for-retail-chatbots/

Global Chatbot market to reach US$ 9.4 Billion in 2024 – reogma. (2020). https://www.reogma.com/industry-reports/global-chatbot-market-to-reach-us-9-4-billion-in-2024/

GUTIERREZ, C., & KHIZHNIAK, A. (2018, July 24). *KLM Handles 2x More Customer Requests with Artificial Intelligence*. Altoros. https://www.altoros.com/blog/klm-handles-2x-more-customer-requests-with-artificial-intelligence/

Hennig-Thurau, T., Groth, M., Paul, M. J., & Gremler, D. D. (2006). Are All Smiles Created Equal? How Emotional Contagion and Emotional Labor Affect Service Relationships. *Journal of Marketing*, *70*(3), 58–73. https://doi.org/10.1509/jmkg.70.3.058

Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic Consumption: Emerging Concepts, Methods and Propositions. *Journal of Marketing*, *46*(3), 92–101. https://doi.org/10.1177/002224298204600314

Hoffman, M. (2023, March 15). *What is a chatbot + how does it work? The ultimate guide*. Zendesk. https://www.zendesk.hk/blog/chatbots-for-business/

Hollebeek, L. D. (2011). Demystifying customer brand engagement: Exploring the loyalty nexus. *Journal of Marketing Management*, *27*(7–8), 785–807. https://doi.org/10.1080/0267257x.2010.500132

How AI and machine learning are helping to tackle COVID-19. (2020, June 2). World Economic Forum. https://www.weforum.org/agenda/2020/05/how-ai-and-machine-learning-are-helping-to-fight-covid-19/

Hsee, C. K., Hatfield, E., Carlson, J. E., & Chemtob, C. M. (1990). The effect of power on susceptibility to emotional contagion. *Cognition & Emotion*, *4*(4), 327–340. https://doi.org/10.1080/02699939008408081

Innis, D. E., & La Londe, B. J. (1994). Customer service: The key to customer satisfaction, customer loyalty, and market share. *Journal of Business Logistics*, *15*(1). https://www.proquest.com.opac.lib.ntnu.edu.tw/scholarly-journals/customer-service-key-satisfaction-loyalty-market/docview/212597591/se-2

Jenneboer, L., Herrando, C., & Constantinides, E. (2022). The Impact of Chatbots on Customer Loyalty: A Systematic Literature Review. *Journal of Theoretical and Applied Electronic Commerce Research*, *17*(1), 212–229. https://doi.org/10.3390/jtaer17010011

Jiang, H., & Zhang, Y. (2016). An investigation of service quality, customer satisfaction and loyalty in China's airline market. *Journal of Air Transport Management*, *57*, 80–88. https://doi.org/10.1016/j.jairtraman.2016.07.008

Jones, M. P., Reynolds, K. E., & Arnold, M. A. (2006). Hedonic and utilitarian shopping value: Investigating differential effects on retail outcomes. *Journal of Business Research*, *59*(9), 974–981. https://doi.org/10.1016/j.jbusres.2006.03.006

Kasinathan, V., Wahab, M. H. A., Idrus, S. Z. S., Mustapha, A., & Yuen, K. Z. (2020). AIRA Chatbot for Travel: Case Study of AirAsia. *Journal of*

Physics: Conference Series, *1529*(2), 022101. https://doi.org/10.1088/1742-6596/1529/2/022101

Key Chatbot Statistics You Should Follow in 2023. (n.d.). ChatBot Blog. https://www.chatbot.com/blog/chatbot-statistics/

Khan, R. B. (2017). Standardized Architecture for Conversational Agents a.k.a. ChatBots. *International Journal of Computer Trends and Technology*, *50*(2), 114–121. https://doi.org/10.14445/22312803/ijctt-v50p120

KLM Bot — ChatbotGuide.org. (n.d.). ChatbotGuide.org. https://www.chatbotguide.org/klm-bot#:~:text=KLM%20named%20their%20chatbot%20BB,BB%20is%20unable%20to%20answer

Life Reimagined: How our values have changed. (2021, June 23). https://www.accenture.com/ConsumerResearch

Marriott International's AI-powered Chatbots on Facebook Messenger and Slack, and Aloft's ChatBotlr, Simplify Travel for Guests Throughout Their Journey. (2017, September 28). Marriott International Newscenter (US). https://news.marriott.com/news/2017/09/28/marriott-internationals-ai-powered-chatbots-on-facebook-messenger-and-slack-and-alofts-chatbotlr-simplify-travel-for-guests-throughout-their-journey

McCollough, M. A., Berry, L. L., & Yadav, M. S. (2000). An Empirical Investigation of Customer Satisfaction after Service Failure and Recovery. *Journal of Service Research*, *3*(2), 121–137. https://doi.org/10.1177/109467050032002

McCollough, M. A., & Bharadwaj, S. G. (1992). The Recovery Paradox: An Examination of Consumer Satisfaction in Relation to Disconfirmation, Service Quality, and Attribution Based Theories. *Marketing Theory and Applications*, 119(3).

Menon, V. (2022, June 8). *How Chatbots Are Revolutionizing The Way Businesses Interact With Customers*. GeekyAnts. https://geekyants.com/blog/how-chatbots-are-revolutionizing-the-way-businesses-interact-with-customers/

Nuruzzaman, M., & Hussain, O. K. (2018). A Survey on Chatbot Implementation in Customer Service Industry through Deep Neural Networks. *International Conference on e-Business Engineering*. https://doi.org/10.1109/icebe.2018.00019

Oracle. (2019). *The Impact of Emerging Technology on CX Excellence*. https://www.oracle.com/a/ocom/docs/dc/em/lpd100807811-impact-of-emerging-technology-on-cx-excellence.pdf

Poser, M., Singh, S., & Bittner, E. a. C. (2021). Hybrid Service Recovery: Design for Seamless Inquiry Handovers between Conversational Agents and Human Service Agents. *Proceedings of the . . . Annual Hawaii International Conference on System Sciences*. https://doi.org/10.24251/hicss.2021.144

Potter, K. (2022, May 23). *Don't Wait on Hold: Message Delta Directly for Support*. Thrifty Traveler. https://thriftytraveler.com/news/airlines/message-delta-smartphone-app/

PricewaterhouseCoopers. (n.d.). *Experience is everything: here's how to get it right*. PwC. https://www.pwc.com/us/en/services/consulting/library/consumer-intelligence-series/future-of-customer-experience.html

Rodrigues, A. (2022, September 27). *Airline Chatbot Benefits, Use Cases, and Examples for 2023*. https://www.hubtype.com/blog/airline-chatbot-use-cases-examples

Ruan, Y., & Mezei, J. (2022). When do AI chatbots lead to higher customer satisfaction than human frontline employees in online shopping assistance? Considering product attribute type. *Journal of Retailing and Consumer Services*, *68*, 103059. https://doi.org/10.1016/j.jretconser.2022.103059

Sakinah, A. N. (2019). THE INFLUENCE OF CUSTOMER SATISFACTION, BRAND TRUST, AND BRAND IMAGE TOWARDS CUSTOMER LOYALTY. *International Journal of Entrepreneurship and Management Practices*, *2*(7), 93–108. https://doi.org/10.35631/ijemp.270010

Selamat, M. A., & Windasari, N. A. (2021). Chatbot for SMEs: Integrating customer and business owner perspectives. *Technology in Society*, *66*, 101685. https://doi.org/10.1016/j.techsoc.2021.101685

Share An Online Entry "The Impact of Chatbots on Customer Loya. . . (n.d.). https://encyclopedia.pub/entry/20265

Sokhey, A. E., Bolton, R. N., & Wagner, J. M. (1999). A Model of Customer Satisfaction with Service Encounters Involving Failure and Recovery. *Journal of Marketing Research*, *36*(3), 356. https://doi.org/10.2307/3152082

Solomon, M. (2021, September 30). *How To Turn (Almost) Any Upset Customer Around: Customer Service Recovery Using The MAMA Method*. Forbes. https://www.forbes.com/sites/micahsolomon/2021/09/30/the-mama-method-for-turning-almost-any-upset-customer-into-a-company-ambassador-through-customer-service-recovery/?sh=5d16fc35f3ea

Study: Humour in ads a must, yet APAC biz leaders remain hesitant. (2022, June 17). Marketing-Interactive. https://www.marketing-interactive.com/ads-humour-leaders-hesitant

Sundaram, D., & Webster, C. M. (2000). The role of nonverbal communication in service encounters. *Journal of Services Marketing*, *14*(5), 378–391. https://doi.org/10.1108/08876040010341008

Suta, P., Lan, X., Wu, B., Mongkolnam, P., & Chan, J. C. (2020). An Overview of Machine Learning in Chatbots. *International Journal of Mechanical Engineering and Robotics Research*, 502–510. https://doi.org/10.18178/ijmerr.9.4.502-510

Taherdoost, H. (2019). What Is the Best Response Scale for Survey and Questionnaire Design; Review of Different Lengths of Rating Scale / Attitude Scale / Likert Scale. *HAL (Le Centre Pour La Communication Scientifique Directe)*. https://hal.archives-ouvertes.fr/hal-03741841

Tajfel, H., & Turner, J. A. (1979). An integrative theory of intergroup conflict. *The Social Psychology of Intergroup Relations*, 33–47.

The (Large) Connection Between Emotion And Loyalty. (2017, February 1). Customer Experience Matters®. https://experiencematters.wordpress.com/2016/08/22/the-large-connection-between-emotion-and-loyalty/

Today, C. E. U. (2022, August 7). *Trying to get an airline, hotel or cruise line's attention? Try these social media strategies.* USA TODAY. https://www.usatoday.com/story/travel/advice/2022/07/15/travel-complaints-most-effective-social-media-strategies/10050046002/

Troxell, N. (2020, July 11). *How kiosks are transforming the airport travel experience*. www.kioskmarketplace.com. https://www.kioskmarketplace.com/articles/how-kiosks-are-transforming-the-airport-travel-experience/

Tsarenko, Y., Strizhakova, Y., & Otnes, C. C. (2018). Reclaiming the Future: Understanding Customer Forgiveness of Service Transgressions. *Journal of Service Research*, *22*(2), 139–155. https://doi.org/10.1177/1094670518802060

Verduyn, P., Ybarra, O., Résibois, M., Jonides, J., & Kross, E. (2017). Do Social Network Sites Enhance or Undermine Subjective Well-Being? A Critical Review. *Social Issues and Policy Review*, *11*(1), 274–302. https://doi.org/10.1111/sipr.12033

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, *92*(4), 548–573. https://doi.org/10.1037/0033-295x.92.4.548

Weiss, H. M., & Cropanzano, R. (1996). Affective Events Theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research in Organizational Behaviour*.

What is a chatbot? | IBM. (n.d.). https://www.ibm.com/topics/chatbots

Yaeli, A., & Zeltyn, S. (2021). Where and Why is My Bot Failing? A Visual Analytics Approach for Investigating Failures in Chatbot Conversation Flows. *IEEE Visualization*. https://doi.org/10.1109/vis49827.2021.9623295

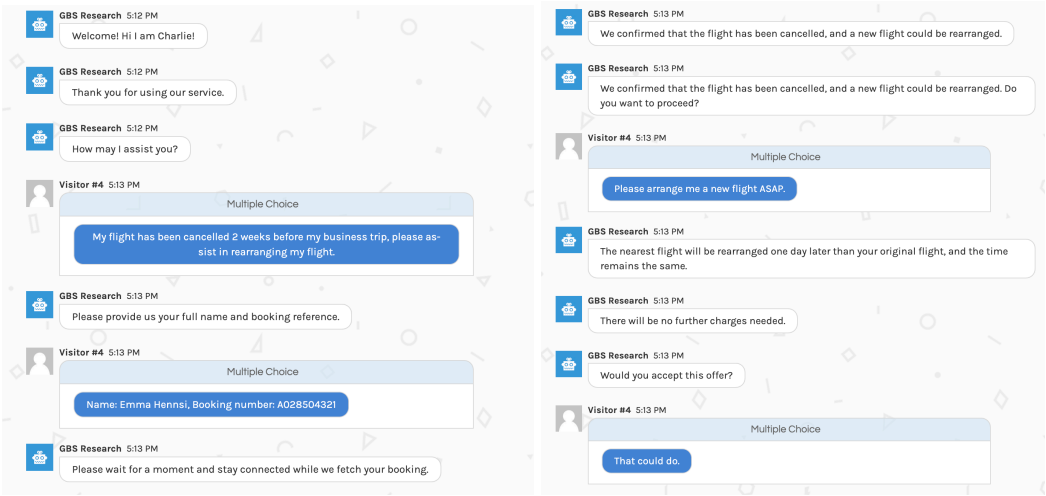
Yüksel, A., & Yüksel, F. (2008). Consumer Satisfaction Theories: A Critical Review. *Consumer Satisfaction Theories: A Critical Review*.

(1994). Customer service: The key to customer satisfaction, customer loyalty, and market share. *Journal of Business Logistics*, *15*(1). https://www.proquest.com/docview/212597591?pq-origsite=gscholar&fromopenview=true

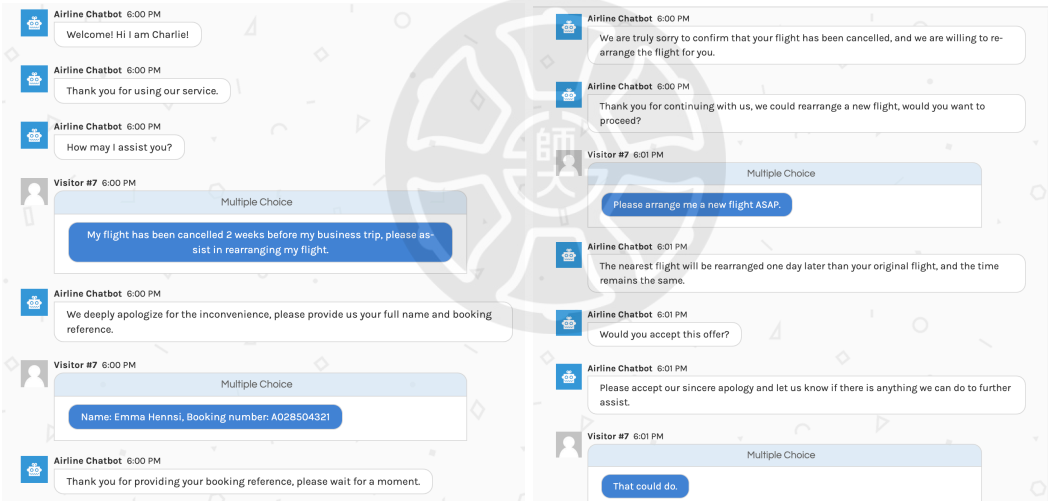
(2017, February 1). *The (Large) Connection Between Emotion And Loyalty*. Customer Experience Matters®. https://experiencematters.wordpress.com/2016/08/22/the-large-connection-between-emotion-and-loyalty/

APPENDICES

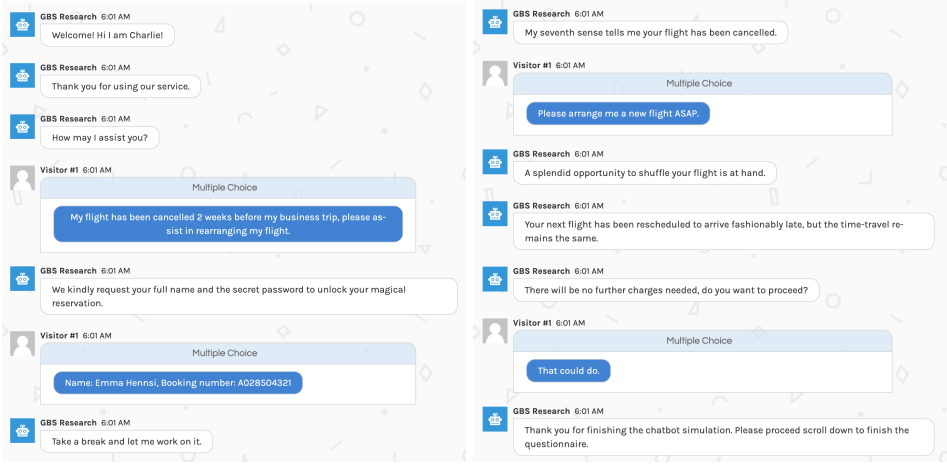
Appendix 1 - Mild Professional Chatbot:



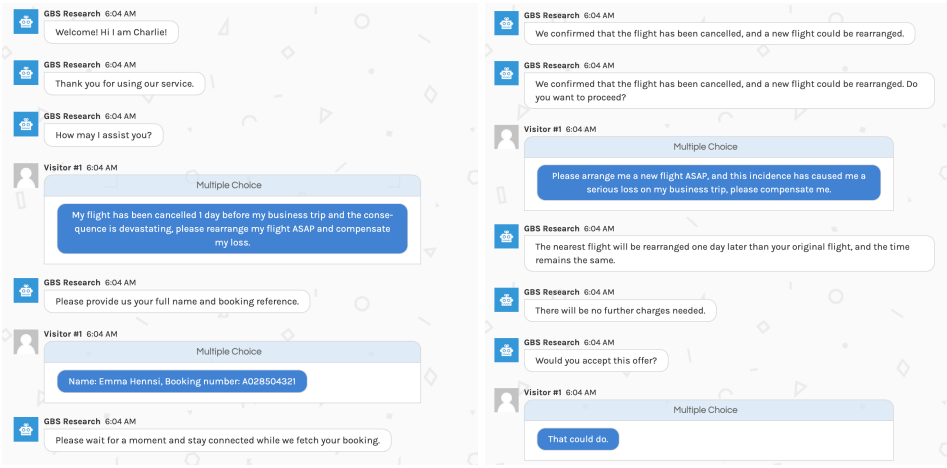
Appendix 2 – Mild Sincere Chatbot:



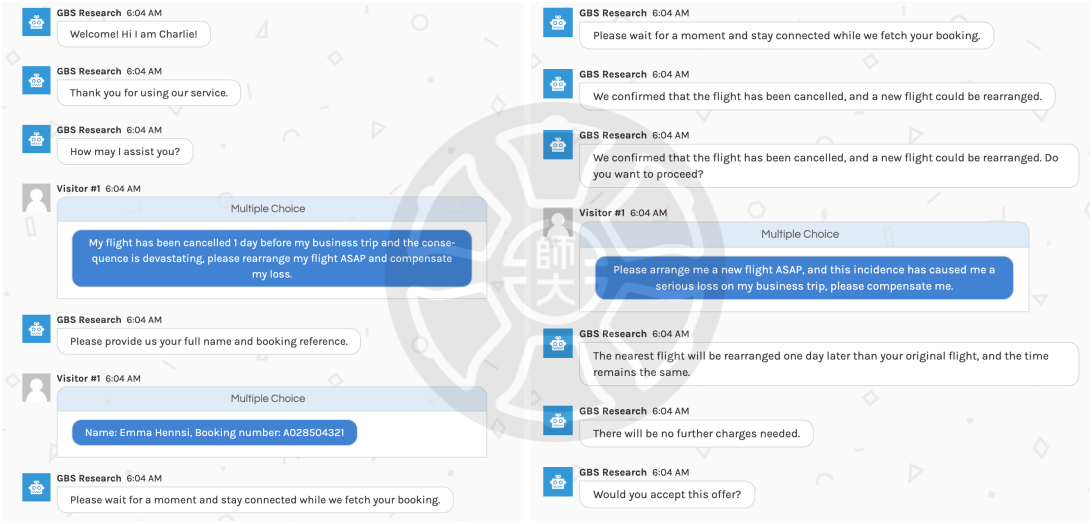
Appendix 3 – Mild Humorous Chatbot:



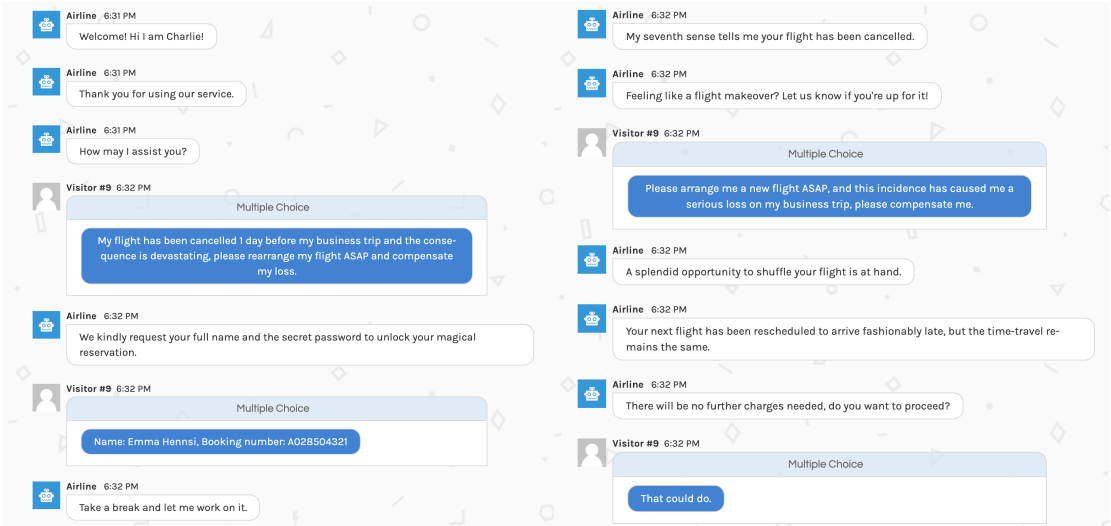
Appendix 4 – Severe Professional Chatbot:



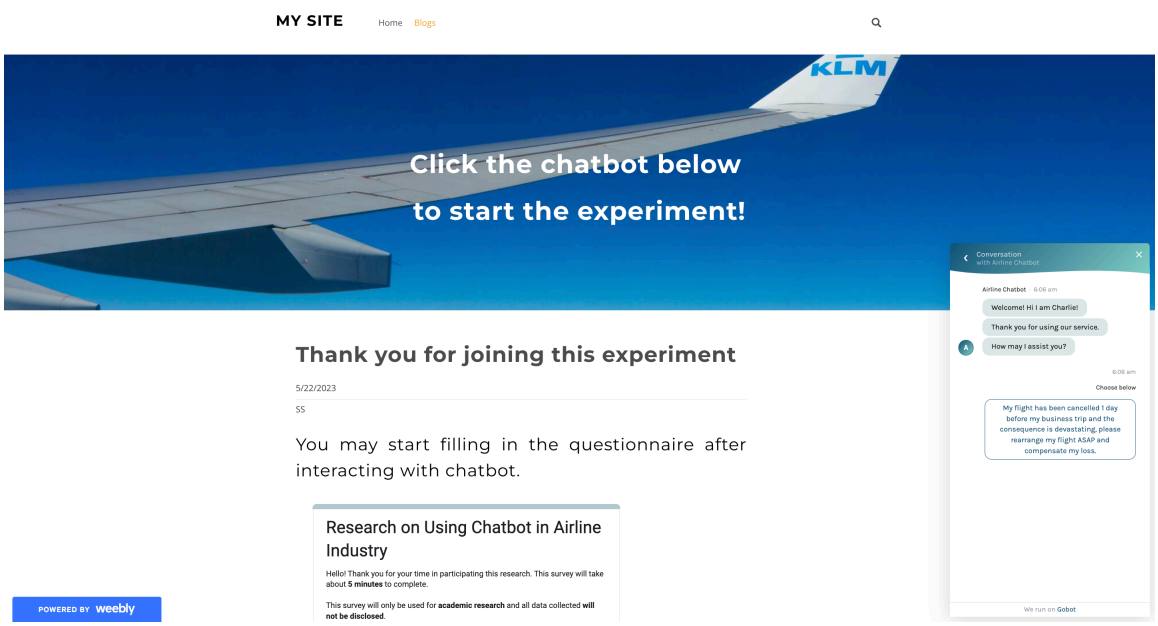
Appendix 5 – Severe Sincere Chatbot:



Appendix 6 – Severe Humorous Chatbot:



Appendix 7 – Experiment Website



Appendix 8 – Questionnaire

1. Have you completed the chatbot experiment?
2. I am willing to use this airline company in the future again.
3. To what extent do you expect to use this airline company for your air travel needs in the next year?
4. Will you keep traveling with this airline in the future?
5. Would you consider this airline company as your first choice for future air travel needs?
6. How likely are you to choose this airline company over other competitors for future travel plans?
7. To what extent do you feel committed to using this airline company for future travel plans?
8. How frequently do you travel by planes?
9. Gender
10. Age