

USING CHATBOTS IN CUSTOMER SERVICE: A CASE STUDY OF AIR NEW ZEALAND

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ABSTRACT

The use of chatbots in a customer-service context is one instance of the application of digital technology to generate a competitive advantage for business. Chatbot service offers precise, instant and tailored responses for customer enquiries through a range of communication channels to many users simultaneously. However, there are concerns about customers' perceptions of whether chatbots offer a human-like experience in customer-service interactions. The focus of this study is to investigate customers' perceptions of the use of Air New Zealand's chatbot customer service and its effects on customer satisfaction. This exploratory study adopted qualitative methodology using semi-structured interviews for the collection of primary data from 11 users of Air New Zealand's chatbot service, Bravo Oscar Tango (Oscar). The results show that the chatbot service is appropriate for solving routine customer problems, providing standardised information for frequently asked questions (FAQs) and resolving non-complex customer issues. Generally, respondents were satisfied with Oscar's service quality. However, customers perceived that the customer-service interactions lack the human-like qualities of a human customer-service agent for resolving complex customer queries. The quality of the chatbot service did not substantially impact on customers' overall satisfaction with Air New Zealand.

KEYWORDS

Chatbot, customer service, Air New Zealand, customer satisfaction

INTRODUCTION

Chatbots in customer service

Adamopoulou and Moussiades (2020), Nasereddin and Faqir (2019), and Cui et al. (2017) define chatbots as computer applications that enable users to seek help or information through text and/or voice. Chatbots have the potential to deliver customer service effectively, with intelligent automation, and to be readily available at all times. A number of airline brands have adopted chatbot services – for example “Jess,” AirAsia; “MHChat,” Malaysia Airlines; “AVA,” Jetstar – to provide customer-service tasks such as retrieving customer bookings, resending itineraries, adding baggage services to bookings, completing a transaction and making a secure flight payment (AirAsia, 2021; Malaysia Airlines, 2021; Jetstar, 2021). Likewise, Air New Zealand introduced its chatbot service, Bravo Oscar Tango (Oscar), on multiple channels (mobile apps, Facebook Messenger, and the web) in 2017.

While there are some studies that have explored the issue of customers' perceptions of chatbot services in the USA, Australia, the Netherlands and France (Brandtzaeg & Følstad, 2017; Meyer-Waarden et al., 2020; Duijst, 2017), extant literature points to a limited number of studies on this issue for the context of Aotearoa New Zealand. Furthermore, the issue of chatbots is becoming more important as more businesses start adopting this technology to serve their customers, hence knowledge on how to make chatbots both efficient and effective adds to the body of knowledge and practice on how to improve chatbot technology for customer service. Effective implementation of chatbot customer-services provides a point of difference for a business to enhance customer satisfaction and loyalty.

Chatbot definitions

We evaluated several chatbot definitions to evaluate the most appropriate definition of chatbot to apply into this study. Table 1, below, presents a number of definitions of chatbots. These definitions show that chatbots possess common elements: software programme, robotic agents, artificial intelligence (AI), conversation, interaction, chats, dialogue, voice and text capability. Hence, the most appropriate definition of chatbot encompassing the above characteristics synthesised for this study is as follows: “chatbot service is a computer application powered by artificial intelligence (AI), which responds to text or/and verbal questions, queries, requests (mostly text-based) using natural language processing (NLP) to mimic human interactions, providing information in the place of a human agent in real-time” (Um et al., 2020, p. 3).

TABLE 1. CHATBOT DEFINITIONS.

Author	Context	Definitions of chatbot	The use of chatbot
Um et al., 2020	Tourism and hospitality	Automated system that emulates person-to-person dialogue through text or voice messages.	Save labour costs, quick response to customer requests, socialising with customers.
Chandra, 2020	Banking	A computer program that uses AI, usually machine learning (ML) to have a conversation with humans; a chatbot could support text input, audio input, or both; tend to support simpler conversations and more singular tasks.	Analyse the customer’s queries and understand the customer’s messages: loan, account, policy, etc., which are bank-related queries; solves customer issues.
Wailthare et al., 2018	Engineering and technology	Computer program that conducts a conversation via auditory or textual method. A chatbot is a software agent that interacts with the user for conversation in natural language.	Customer service, call centres.
Abdulquadri et al., 2021	Finance	Robotic virtual conversational agent, which can interact and exchange voice and text messages with one or more simultaneous users via a computer network.	Provide 24-hour service, engage with customers and support the drive for financial inclusion through the provision of accessible financial services and products, to enhance customer satisfaction and increase digital capabilities.
Bulla et al., 2020	Medical	A program that uses AI, capable of chatting with a user in a natural language from, or over the internet, virtual chat rooms, forums, tablets, and messaging applications.	Customised recommendation centred on the symptoms; know-how for a safe life; appointment with patients, medical consultant and provide the correct safeguards.
Winkler & Soellner, 2018	Education	Computer programs used to conduct auditory or textual conversations, intelligent tutoring systems.	Provide immediate and customised feedback to lecturers and students; allows students to remain in the driver’s seat and actively control their learning process; deliver future managers the right information at the right time to make the right judgements and decisions.

Chatbot benefits

Chatbot applications for customer-service support offer several benefits. A chatbot is adopted to respond to fast-changing customer demands and expectations, conveniently from anywhere, reducing customers’ wait times (Trapero et al., 2020; BARNZ, 2018; Adamopoulou & Moussiades, 2020; Winkler & Soellner, 2018). The airline sector receives the most customer inquiries of any field (Statista, 2020). During the Covid-19 period, inquiry volumes

related to flight cancellations, postponements or travel restrictions have put massive pressure on customer services, making it difficult to give customers adequate information in a timely manner (Kasinathan et al., 2020; Dixon et al., 2020). As stated by Debecker (2016), 69% of customers expect to access information immediately; about 50% of customers expect a business to be available 24/7 and able to be contacted through messaging platforms, moving away from email or pressing phone buttons to navigate across various departments.

Chatbots have shown that they provide high-quality support with fewer errors than their human counterparts through AI applications (Kurachi et al., 2018). Chatbots cut down on human errors, based on a historical database to better support consumers' future purchase decisions and increase trust in customers' minds about a trustworthy business (Brandtzaeg & Følstad, 2017). The main challenges with getting support from human agents are inadequate knowledge and inconsistency among agents, and websites are unable to deliver answers throughout the travel-planning process (Barber & Goodman, 2011). A lack of consistency, such as conflicting information, might force customers to contact the airline or business several times, leaving them frustrated and confused (Susskind, 2004). Consistency is closely associated with trust when it comes to brand loyalty. Hence, achieving consistent and precise information across multiple communication platforms where people engage with the brand is vital for the customer experience (Herath et al., 2019).

Chatbots with better functionalities automate business processes to personalise user experience and increase customer engagement by creating a smooth experience across every stage of the customer journey (Ukpabi et al., 2019; Ubisend, 2021; Brandtzaeg & Følstad, 2017). Chatbots navigate users during the buyer-awareness stage to find relevant information on an airline's website, introduce products and educative information, and shorten the time it takes to obtain the desired information (Zarouali et al., 2018). A survey of 1000 Americans seeking accommodation online found that during the purchase evaluation process, 62% of customers had difficulty in finding the right deal, and a further 49% of users visited from four to seven web pages to find appropriate accommodation information (Rokou, 2018). In this regard, chatbot algorithms provide solutions by giving a customer relevant, tailored information in accordance with the customer's preferences and browsing history (Ukpabi et al., 2019; Rokou, 2018). For example, the Kayak bot can deliver a wide range of relevant information for passengers before, during and after the purchase stages of the customer journey. Users can find hotels, rent cars, book flights and receive live updates about their trips, flight delays, check-in status and trip-planning recommendations (Kayak, 2016). Thus, chatbots have the potential to improve the customer's purchase experience and simplify the travel decision-making process, resulting in improved customer retention and advocacy (Wereda & Grzybowska, 2016).

Chatbot usage challenges

By developing a better user perception, a business can spot common user pain-points and improve the experience in the customer journey (Chan & Yazdanifard, 2014). A survey by Beaver in 2017, of more than 5000 users from six countries, showed that overall positive feeling (38% of customers) towards chatbots outweighed the negative (11% of customers). However, in other studies, customer perceptions about the human-like features of chatbot performance present varying evidence, as shown in Table 2. One category of challenges that chatbot technology faces is that there is a customer segment for whom the lack of human-like features in the functionality of chatbots has a negative effect on whether they are likely to use chatbots. This issue presents a challenge in how to develop a chatbot that can mimic human-like features in interactions with customers.

TABLE 2. PERCEPTIONS OF HUMAN-LIKE FEATURES OF CHATBOTS.

Perceptions	Positive	Negative
Human-like emotions	<p>Positive impact on emotional connection, people feel more understood and derive more usefulness from the website (Meng & Dai, 2021).</p> <p>Injecting emotion into conversation content might decrease customers' stress, more in line with their expectations, leading to enjoyable, likeable, empathic feeling (Meng & Dai, 2021).</p>	<p>Do not have real emotions like humans and cannot imitate human conversation perfectly (Sanguinetti et al. 2020).</p> <p>Chatbot may not, or may naively, display empathy, deliver cultural sensitivity, act with urgency, understand human tonality, understand non-standard questions (Carter & Knol, 2019).</p>
Human-like cues	<p>The more anthropomorphic design cues present in the chatbot, the more highly customers rate positive social interactions with machines as human agents (Fink, 2012; Adam et al. 2020; Čaić et al., 2019).</p> <p>Chatbot is non-judgmental, so customers can overcome the fear of being judged and stop worrying about what others might think, especially when making a complaint or disclosing sensitive information (Lucas et al., 2014).</p>	<p>Setting up too many human-like features might disappoint users because of false expectations resulting from an imbalance between a chatbot's design and its knowledge; or the creepy/scary feeling when users encounter a computer programme that is almost human (Holtgraves et al., 2007).</p>

Users are generally more comfortable communicating with a chatbot that can mimic human interactions (Purington et al., 2017). According to Svenningsson and Faraon (2019), building human attributes in a chatbot is a good way to improve user engagement and emotional connection with a brand. A chatbot that has a social presence, like a virtual avatar, or smart voice-assistant system, with a natural tone of voice, is considered more enjoyable, co-operative, and capable of providing good solutions than those that do not (Senseuse et al. 2019). However, Duijst (2017) argues that personalisation aspects like emotion do not have a remarkable impact on user experience, especially in situations of urgency. Some clients are even negative about a chatbot that shows empathy and emotion (Duijst, 2017). For this customer group, the main consideration is about a chatbot's productivity level in providing help and information free of identical responses or bias (Meyer-Waarden et al., 2020; Brandtzaeg & Følstad, 2017). These differences in customer perceptions suggest there is one category of customer who prefers human cues in a chatbot, while another customer group focuses on the task and may not see the lack of human cues in a chatbot as a disadvantage. To summarise, task-oriented customers prefer a significant level of support in a chatbot to improve their productivity rather than spending time on engaging with a bot's personality for entertainment. Likewise, emotionally driven clients prefer human cues in the bot more than informative ones, to build a brand relationship (Følstad & Skjuve, 2019). One other factor for the increased usage of chatbot technology is the degree of customer motivation to use new technology in this context; consumer perceptions and attitudes determine customers' willingness to adopt new technology (Jain & Sareen, 2014). People who perceive chatbot technology positively are motivated to use the chatbot service (Fink, 2012; Adam et al., 2020; Čaić et al., 2019). Likewise, negative perceptions influence customers' reluctance to use chatbots in customer service (Um et al., 2020).

Satisfaction with chatbots

The intense competition among airlines makes it imperative that an airline brand aims for high levels of customer satisfaction (Clemes et al., 2008), because customer satisfaction is the precursor to customer loyalty and repurchase behaviour. Customer satisfaction for business arises from the contexts of overall customer satisfaction and transaction-specific satisfaction (Keiningham et al., 2006). To attain high overall satisfaction, a business must be perceived to provide high levels of support at every touchpoint in the customer purchase journey (Bodet, 2008). It is suggested that high satisfaction ratings for a business provide the basis to retain customer loyalty (Bodet, 2008). In addition, satisfied customers support the creation of goodwill by generating positive word-of-mouth based on good customer experiences (Chan & Yazdanifard, 2014). Overall satisfaction can be defined as customers' evaluation

of the company according to their experience, and it is achieved when customers are provided services or products that meet their expectations (Deng et al., 2010; Omisakin et al., 2020; Veloutsou et al., 2005). Overall satisfaction also is found to be a significant determinant of customer loyalty (Gures et al., 2014).

Transaction-specific satisfaction arises from individual episodes of customer interaction with the business or service provider during the customer journey. For an airline customer journey, a customer may experience various interaction episodes of service, from baggage handling, on-time performance, food quality, check-in service and customer service for evaluating airline service quality (Ban & Kim, 2019). Thus, transaction-specific customer satisfaction may vary from one episode to another. Therefore, a customer chatbot interaction is an example of an episodic interaction with the business. A good chatbot customer experience will have positive-transaction customer satisfaction, while a negative experience might mean a poor rating on transaction-specific satisfaction. Each episode of transaction-specific satisfaction will contribute to the customer's perception of the overall satisfaction rating (Bodet, 2008; Veloutsou et al., 2005). We reason that chatbot customer-service is an example of a customer episode, and the customer's chatbot experience will have an influence on their overall satisfaction rating, based on the combined customer evaluation of customer-satisfaction individual ratings from the episodes of interactions experienced in the customer purchase journey. We contend that if the chatbot service delivers good customer service, this will positively influence overall customer satisfaction (Clemes et al., 2008).

RESEARCH AIM AND QUESTIONS

Air New Zealand's driving purpose is a 'customer-first culture' which means customers lie at the core of everything they do, and they strive to provide meaningful connection and excellent standards for every customer (Air New Zealand, 2021). To support this objective, in 2017 the airline developed a customer service Chatbot named Bravo Oscar Tango (Oscar), powered by AI, across multiple channels, including mobile apps, collaboration apps like Facebook Messenger, and the web.

The aim of this study is to assess customer perceptions of how Air New Zealand is adopting the chatbot for customer service and its effect on customer satisfaction.

From this overall research aim we draw out two research questions:

- Is the human-to-chatbot interaction perceived as equal to human-to-human interactions?
- Does customer interaction with the chatbot affect transaction-specific and overall customer satisfaction?

METHODS

This is a qualitative study that used semi-structured interviews and open-ended questions based on the issues identified in the two research questions. One advantage of qualitative research is that it has the potential to provide rich, detailed insights for studying a phenomenon (Lee & Krauss, 2015). Therefore, qualitative data is appropriate to tease out underlying meanings, opinions and feelings embedded in customers' chatbot experiences by analysing their statements to investigate the issues for this study (Given, 2008). A convenience-purposive sampling method was used to select participants for the study (Etikan et al., 2016). A purposive sample identified participants who had previous experience in using the Air New Zealand chatbot to provide responses to interview questions (Andrade, 2020). Data-collection interviews were conducted in the second half of 2021. All participants were over 18, and the interviews focused on collecting information on participant perspectives, perceptions and feelings regarding the Air New Zealand chatbot. By using the filter question "Have you used the chatbot from Air New Zealand before?" the researchers initially eliminated those who had not from the interviews. As this is an exploratory study, the primary data was collected from a small sample of 11 participants, hence the results in this study should not be generalised (Etikan et al., 2016).

Ethics approval for primary data collection was given by Otago Polytechnic Research Ethics Committee (OPREC) on 17 June 2021, Reference # AIC84, prior to data collection. We used 13 open-ended questions to tease out insights for the research questions. Appendix A lists the specific interview questions for the study. The open-ended questions related to the contexts of each of the research questions. Additionally, the conversational flexibility of a semi-structured interview allowed both the researcher and the participant to explore participants' thoughts and perceptions with follow-up questions (DeJonckheere & Vaughn, 2019; Turner, 2014).

Braun and Clarke's thematic analysis technique was employed to generate common themes and patterns for this qualitative research (Clarke et al., 2015). Thematic analysis identifies the frequency of a theme in a whole content and uses those themes to address an issue (Maguire & Delahunt, 2017). Data collected from the interviews was analysed based on six stages: data familiarisation, generating initial codes, theme development, theme revision, defining themes and writing up (Braun & Clarke, 2012). The interview recordings were transcribed and the transcription was verified by the second author to check for the accuracy of transcription. Next, the data was transferred to an Excel file to analyse text data by looking for similar keyword or phrases and patterns of meaning. In the next stage, the researcher reviewed preliminary themes and refined them to the final patterns.

RESULTS

This section reports the findings collected from the data analysis of the semi-structured interviews. These findings are reported along three themes, Themes 2 and 3 mirroring the research questions for the study. The first theme reports on the types of issues the chatbot resolves, the second reports on customer perceptions of the human-like qualities of the chatbot, and the third theme presents findings on customer satisfaction with the chatbot facility.

Theme 1. The type of issues participants used Oscar for

... search for anything that you like ... it is the first-line customer-service support ... (Participant 7)

... enquiry or [something] I cannot find on the website ... (Participant 8)

... use the chatbot to ... detail information about my travelling, such like ... my seats for the travelling, confirming my allowance for the baggage, or what are the movies that came during my flight journeys, and taking my points and also confirming my booking tickets. (Participant 5)

... to make booking inquiries, to check flight schedules, in the future I will certainly use it to book flights. (Participant 6)

... available 24 by 7... give me instant feedback ... make my work very easy... make my process [easier] for booking and planning my journey. (Participant 5)

Generally we use the chatbot just to [look] for some common information ... more detailed question, then we don't get answers, ... just directing us towards ... the website pages ... not giving me some better kind of solution that I need ... (Participant 2)

Summary of findings: Theme 1

Oscar, the Air New Zealand chatbot, is considered front-line customer-service, or a substitute for a customer representative to initially connect with Air New Zealand. Most customers used Oscar when they could not find general information, common questions (FAQs), or terms and policies on the website. For these kinds of information, Oscar was useful and acted in the best interests of the customers during their purchasing journey. Despite Oscar's limited problem-solving capabilities, our findings suggest that for basic informational customer enquiries, chatbot customer-service provides relative ease of use, convenience and faster accessibility for customer enquiries.

Theme 2. Participants' perceptions of the human-like qualities of Oscar

... doesn't pick up informal language ... does not have any other languages ... needs to be more streamlining or improvement with the composition of the sentences. (Participant 4)

... felt very monotonous, didn't have any feelings ... (Participant 4)

... cannot find the solution to my query ... more complex questions where there's one or two things that are combined ... (Participant 4)

... talk to human to solve the problems that the bot can't help. (Participant 10)

[Human agents] ... get a sympathy, undertaking your situation, give a practical judgment and give practical outcomes ... giving you a suggestion, which will be reliable, very useful... (Participant 5)

... chatbot so far doesn't make a mistake, so there's no more no error. A human could give incorrect information, or not be precise... (Participant 6)

[When having] ... specific things that you really need to discuss ... get to an agent. (Participant 11)

... basic information ... use chatbot ... it will save time ... If you have plans, specific questions and details ... not really usual ... having any problem ... call an agent to get an update ... (Participant 11)

... pick a chatbot first. And then human agents kind of follow up action. (Participant 8)

Summary of findings: Theme 2

Findings suggest that customer–chatbot interactions lacked emotional or anthropomorphic attributes in contrast to human-to-human conversations. Additionally, participant perceptions are indicative that Oscar has diminished capabilities for understanding contextual nuanced meanings in customer conversations. Participants also pointed to a lack of an emotional connection when using Oscar. However, customers are generally prepared to use chatbots as a first-line customer support and consider human customer-service agents as the second-line customer support.

Theme 3. Participants' satisfaction with Oscar

Not satisfied ... sending you the same question over and over again until you figured out your answer ... (Participant 7)

Satisfied, because they can provide basic information, give out ... some other contact or follow-up action that I can do ... (Participant 8)

Not really ... only addressed one of my current problems and only if it's identified. The more specific the problem I have, the less useful the robot's gonna be ... (Participant 9)

... this is a whole package and chatbot is one of the ... reason that I will repurchase. (Participant 8)

... would try it if they change the system: the system is very traditional and it's very slow, it's not clever. (Participant 1)

Yes ... it supports every concern of your journey, and it's been a great help. (Participant 5)

Air New Zealand I'm satisfied ... very responsible ... no other better airlines in the country ... flagship airlines company in the country ... (Participant 4)

Summary of findings: Theme 3

The findings for satisfaction with the quality of Oscar's service in resolving customer-service issues were mixed: 6/11 were satisfied and 5/11 were not satisfied with the chatbot's resolutions. Despite mixed views, participants

also indicated that they were willing to use Oscar in the future and would recommend it to others. The mixed perceptions of Oscar's performance did not appear to be a key driver for customers to leave Air New Zealand.

DISCUSSION

Chatbot usage

As noted previously, this is an exploratory study carried out with a small number of participants. The summary of findings for Theme 1 shows that participants in this study found that Oscar, the Air New Zealand chatbot, is a convenient facility to support them in their purchasing journey. Oscar acts as a frontline customer-service encounter to provide real-time customer enquiry support. In these contexts, participants found Oscar to be an efficient digital application to support customers, even for those with disabilities, who can communicate with relative ease by chatting or through the button options. This finding is consistent with previous studies (Kasinathan et al., 2020; Bradley, 2017), which report that chatbots are designed to handle standard questions and more singular tasks, but are not as well suited to resolving complex customer enquiries. The participant findings also show the chatbot service is beneficial for customers, in that the chatbot customer-enquiries provide quick resolutions with consistent information, aligning with the findings in some recent studies (Adamopoulou & Moussiades, 2020; Winkler & Soellner, 2018; Ukpabi et al., 2019; Ubisend, 2021; Brandtzaeg & Følstad, 2017).

Perceptions of human–chatbot and human–human interactions

The findings from the participants in our study suggest that Oscar demonstrates a reduced level of human-like qualities in the context of its avatar and limited language capabilities. The avatar is not a human face, but just a little cartoon face in a pilot's cap, which does not resonate with customer users on first impression, leading them to perceive lower connections or engagement (Nowak & Rauh, 2005). These findings show the relevance of humanising Oscar to enhance customers' engagement, especially for emotionally driven people, as observed in a previous study (Svenningsson & Faraon, 2019). When users feel a relationship or emotional connection with a chatbot, they might be committed to using it more frequently, which is in line with findings reported by Meng and Dai (2021). The participants in our study state that Oscar has some way to go to improve its ability to simulate emotional qualities like humour, empathy and gratitude; this can contribute to negative attitudes towards a chatbot, as suggested in the study by Carter and Knol in 2019. A caveat to note is that not all customers like or prefer the use of chatbot technology in customer-service interactions, even when a chatbot shows empathy and emotion (Duijst, 2017). Further, the literature points to emotionally driven customers who prefer human cues in chatbot technology, while task-oriented customers are focused on productivity (Meyer-Waarden et al., 2020; Brandtzaeg & Følstad, 2017). These different preferences are reflected in our findings in this study. The evidence of differing customer preferences suggests a need for service providers to understand the multiplicity of customer perceptions and behaviours for the successful adoption of chatbot technology in customer-service interactions. Therefore, providers must consider the differing customer groups in the adoption and implementation of chatbot technology.

Our findings also suggest that human–chatbot interactions have noticeable differences regarding word-pattern quality and behaviour compared to human–human discussion. Although supported by a lot of artificial intelligence (AI) and neuro-linguistic programming (NLP) technology, which allows a bot to understand complexity in human language and to provide similar complex responses, Oscar does not understand 100% of customers' inquiries and human tonality. Oscar is equipped with English only, and is weak in catching everyday language. People must make sure their language is concise and exact to allow Oscar to understand and deliver precise answers, which is consistent with the findings of Hill et al.'s (2015) and Bradley's (2017) research.

Customer satisfaction

Oscar is a first touchpoint for Air New Zealand customers. Fifty-five percent of participants in our study stated that they were satisfied with Oscar's service quality to solve their questions or problems. For our participants, Oscar's human cues, usefulness, and ease of use had a considerable influence on their customer experience and were critical factors in how positively or negatively they perceived human–Oscar interaction. However, participants in our study suggested that the lower-quality customer experience of Oscar on its own would not make customers leave Air New Zealand. For our participants, the quality of Oscar in itself did not have a significant influence on their repurchase intentions and loyalty, which is supported by the work of Jones & Suh (2000) on the relationship between overall satisfaction and transaction-specific satisfaction, and their influences on repurchase intention.

CONCLUSION AND RECOMMENDATIONS

Limitations and further research

This an exploratory study using a small sample of 11 participants. Hence, these results should not be generalised (Etikan et al., 2016). In the context of future research, we suggest that this is an important area, which is set to grow in the near future. We suggest that future studies adopt a larger sample and mixed-methods research to expand the knowledge-base for the application of chatbots in business (Tongco, 2007; Etikan et al., 2016).

Chatbot capability

To increase Oscar's uptake with customers, its capability might be improved by greater resolution accuracy for routine customer issues, as well as adding capabilities to resolve moderately complex customer enquiries as the next step in Oscar's capability development. As an example, AirAsia builds actionable customer segments with an effective implementation of machine learning. With data integration, the AirAsia chatbot can access customers' history, so it can suggest solutions based on past interactions or even website browsing activity, to proactively suggest relevant content and solutions related to what the customer has accessed in the past (Ada, 2021).

Making Oscar more empathetic

From the findings, customers feel Oscar lacks the capability of empathy. Injecting a human touch into Oscar, such as humour, sympathy or gratitude, through wording options, could resolve that problem. For example, Blue Bot, the KLM airline chatbot, performs very well in providing a conversational experience for customers. Blue Bot has strong natural-language understanding, human-like speech synthesis and deeply conversational communication, which gives users an easier and more comfortable communication experience (Wavyr, 2019). The Norwegian Airlines bot is equipped with five languages to increase personalisation of discussions (Kindly, 2021). In 2019, the low-cost carrier AirAsia launched its chatbot AVA, which speaks eight languages (AirAsia, 2019).

Chatbots were originally configured purely for text-based conversations, but thanks to technological innovations and advanced NLP, there are now chatbots that can conduct speech-to-text and speech-to-speech conversations (e.g., Siri, Alexa, etc.). Therefore, a suggestion is for the provision of voice options in Oscar to deliver faster resolution compared to engaging in a text conversation only, also offering a more natural way of functioning for humans than texting. A voice bot is helpful for people who are not good at typing, because it enables them to accomplish tasks hands-free. For example, Indian airline SpiceJet has launched a voice bot named Pepper on an AI platform to address customer needs or connect employees to co-ordinate customer requests (PTI, 2020). Emirates has introduced a team of four virtual assistants with human names: Leo, Emma, Tom and Lara. Two are male and two are female, and they all have 2D human faces with different skin tones and hairstyles, as a means of presenting different ethnicities (Emirates, 2021).

In conclusion, by drawing on understandings of customer insights about chatbot service quality, Air New Zealand can improve the quality of Oscar's customer service, which will influence and enhance customer satisfaction, retention and loyalty for the Air New Zealand brand.

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APPENDIX

Interview questions

1. What do you think you would personally use a chatbot for?
2. When would you find a human agent to support your problems/questions?
3. What factors do you consider most when you seek support from a chatbot or a human agent?
4. Please list any benefits and challenges in using the chatbot to support your questions/problems?
5. Would you prefer to converse with a chatbot or a human for your customer-service needs?
6. In your experience, would you be able to pick up any differences between dealing with a chatbot or a human? (E.g., word pattern, behaviour, etc.)
7. What are your feelings or concerns toward the use of chatbots in customer service for solving your questions/problems?
8. What are your feelings or concerns toward human agents for solving your questions/problems?
9. Are you satisfied with the chatbot service quality to solve your questions/problems? Why or why not?
10. Is the chatbot a reason for you to repurchase or leave the organisation?
11. What can Air New Zealand do to improve its chatbot services in customer service?
12. Are you satisfied with the purchase experience using the chatbot with Air New Zealand? Why or why not?
13. Would you use the chatbot in the future? Why or why not?