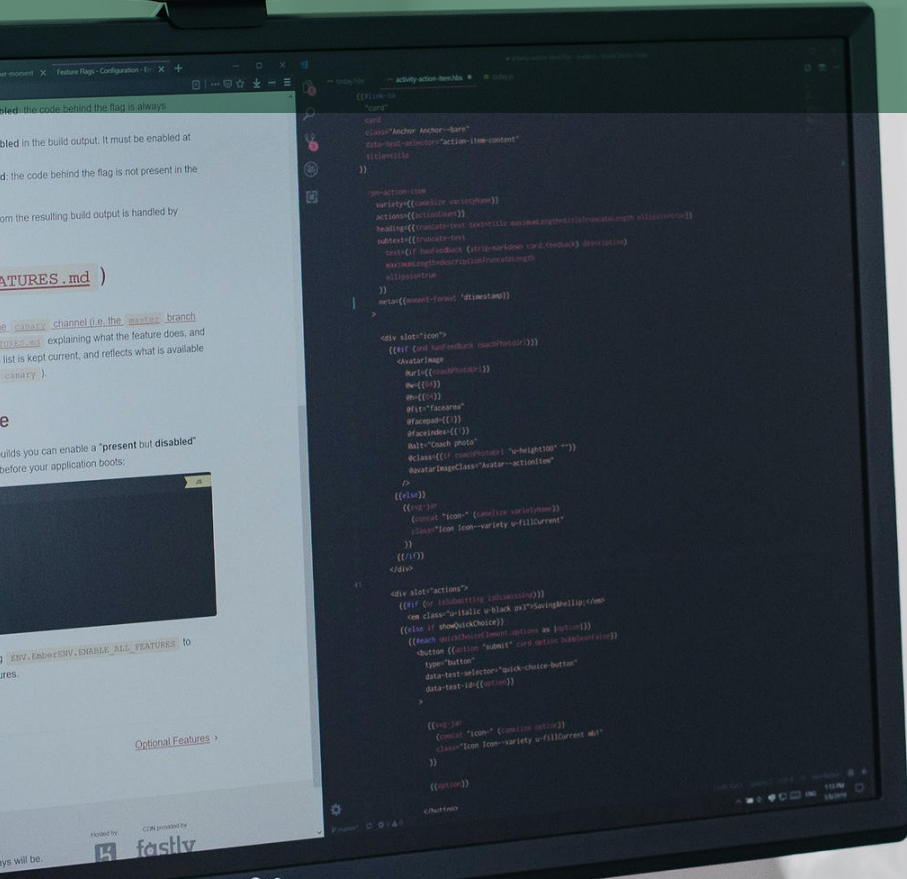


# GENERATIONAL USE OF A.I. CHATBOTS IN MARKETING COMMUNICATION

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In today's digital age, innovations in online communication tools for brands happen all the time. In recent years, the use of artificial intelligence (A.I.) chatbots has emerged as a way to interact with brands anytime, anywhere. A.I. chatbots can be looked at as the most recent digital marketing tool that is shifting how people interact online using machine agents providing services for online users (Brandtzaeg & Følstad, 2017, p. 1).

The fact is that A.I. is becoming a game-changer in the digital marketing and communication world. A.I. is set to automate and provide digital marketing opportunities to provide faster, more efficient answers to user questions and concerns while also offering easier communication avenues for users of all communication levels (Dumitriu & Popescu, 2020).

Current interest is found in the growth and development of A.I. and machine learning to reach online users. Companies like Google, Facebook, Microsoft, Slack, Kik, and Viber see A.I. chatbots as the future of brand communication. In fact, from 2016 to 2017, over 30,000 chatbots were released on Facebook Messenger alone (Brandtzaeg & Følstad, 2017).

This is a topic that has been studied but has limited scope due to its relatively new emergence in the digital space.

## **LITERATURE REVIEW**

### **A.I. DEFINED**

The increasingly fast innovation of technologies has led to nearly constant innovations like A.I. technology. A.I. is a subset of science and technology that is founded on intelligent machines and computer programs to simulate human thought and interactions to help answer or address online users' questions and concerns (P.K., 2021). It sits at the center of computer research and design using what's called heuristic

programming, or the ability to make computers solve difficult problems for users (Minsky, 1961). Within the realm of heuristic programming, there are five main categories: search, pattern-recognition, learning, planning, and induction which essentially create the way A.I. finds, identifies, and categories information to provide to online users.

A.I. chatbots use what is called natural language user interfaces to scan for data and provide answers to users online. This technology, though, creates a lack of understanding in users that can create a schism in their adoption and trust within the A.I. chatbot itself, making it difficult to transition from more established user interfaces – i.e., websites and mobile applications (Brandtzaeg & Følstad, 2017).

## **A.I. RESEARCH IN DIGITAL MARKETING COMMUNICATION**

Current existing research on the use of A.I. within digital marketing communication has been done on how to use the technology as a tool within a larger digital marketing plan.

The opportunity for the use of A.I. chatbots within digital marketing communication is there, specifically within human-to-machine interactions. Within the Internet of Things, the role of digital technologies, especially in artificial intelligence, has become key in crafting strong, diverse online interactions between brands and their online users (Kaczorowska-Spychalska, 2019).

Research from Balasudarsun et. al (2018) shows that having a well-designed experience with an A.I. chatbot, especially on platforms like Facebook Messenger, was critical for marketing. Their study also showed two distinct groups of chatbot users. One group wanted a large amount

of activity from their chatbot interaction, including visual content like photos, videos, and emoji content to have more fun in their chats. Yet, the other group wanted short, personalized, and efficient pieces of information, preferring serious, appropriate language that didn't take up too much space on the platform. So, when looking at their findings, it seems that the use of A.I. chatbots depends on a brand's target market's typical consumption of content to be effective.

The use of A.I. chatbots can also shape consumer perceptions and relationships with online users. Ultimately, A.I. chatbot cannot be avoided in today's digital age, so understanding the layers of users' interactions can make a large impact on consumers' perceptions of a brand based on the A.I. chatbot's functionality, emotion, and ability to simulate a human-like experience (Chen et. al, 2021). In addition, customer relationships can be determined by the experience a brand's A.I. chatbot can provide to users, according to research from Cheng et. al (2021), which specifically calls out that the information, interaction, accessibility, and entertainment factors need to meet or exceed the user's standards. The study, based on survey data from users of the top 30 U.S. brand chatbots, also identifies that these factors create a direct link between brand and consumer relationships and the future quality of communication.

## **GAPS IN LITERATURE**

While there has been research done around A.I. and its use in digital marketing communication, there is a clear gap in how different generations adopt and use A.I. chatbots for brand engagement. Most existing research on A.I. demographic use is either specific to certain industries or generalized to look at how businesses can use A.I. chatbots as a digital marketing tool.

An example would be Cheng and Jiang's (2020, 2021) research studies that investigated how A.I. chatbots can establish relationships between brands and online users, as well as how A.I. chatbots can impact a user's experience with a brand. Both studies provide an excellent context in the use of A.I. chatbots overall, but don't dive into the why behind users' motivations to use A.I. chatbots.

The reality is that A.I. marketing communication cannot be avoided (Chen et. al, 2021), but there needs to be a focused look at why different generations adopt and use A.I. chatbots to design better chat experiences.

That is the focus of this research proposal: to get to the bottom of the generational use of A.I. chatbots to better understand user behavior and increase adoption rates for brands in their online presence.

## **RESEARCH QUESTIONS & THEORY**

Throughout this research study, I will use the Uses & Gratifications Theory (UGT) developed by Katz, Blumler, & Gurevitch (1973), which focuses on why receivers — in this case, digital users — choose to use certain media forms — i.e., A.I. chatbots. Since we as human beings have free will and options — of which there are plenty in today's digital age — we do not have to use any certain platform or media. So, in the study of A.I. chatbots, I can use this theory to drive the questions and research methods to find trends among generational groups to better understand the motivations for their adoption, or lack of, when it comes to A.I.

There is already existing literature done using UGT concerning chatbots that can also help focus my research.

Brandtzaeg and Følstad (2017), used UGT to understand on a grand scale why people

use chatbots. Their findings show five main categories of motivation: productivity, entertainment, social and relational, novelty, and an “other” category of a few findings that didn’t fit within the other groupings.

Meanwhile, Cheng and Jiang (2020) conducted a survey study using UGT to determine four main categories of user gratification when using A.I. chatbots: social, entertainment, information, and media appeal.

There is some crossover between the two studies, showing that the main driving factors for using A.I. chatbots are gathering information, being entertained, and seeing why everyone else is interested in chatbots. My study will combine their overlapping four categories to identify generational motivations, including seeking information, entertainment, social, and media appeal.

For my research, I plan to use these findings as a baseline to drive questions around generational motivations to identify certain trends within each group.

**The driving research question for this study is as follows: Do different generations attempt to interact with A.I. chatbots differently?**

I hypothesize that yes, there are differences. When looking at four different generations: Baby Boomers, Generation X, Generation Y (Millennials), and Generation Z, the assumptions are that younger generations — Millennials and Generation Z — will be more likely to interact with a brand’s chatbot, while Baby Boomers and Generation X will be more resistant due to privacy concerns or a lack of trust from a non-human interaction.

A sub-question within this research deals with expectations of A.I. chatbots: Do

different generations expect A.I. chatbots to do different things for them? (For example, does one generation drive the conversation versus another waiting for the A.I. chatbot to do everything for them?) Most likely, there will be differences between generations who have grown up with digital technologies versus those who haven’t. But, using UGT, I can tailor questions to provide more definitive answers among generations.

Using the existing research around A.I. chatbot use through the lens of UGT, I will base methodology and questions around how each generation uses, or doesn’t use, A.I. chatbots based on gathering information, seeking entertainment, or checking out the novelty of the technology itself.

## **METHODOLOGY**

This study will be conducted through user interviews and testing managed by a third-party user testing platform to allow for video and screen recording and to reduce anxiety about having someone watch their performance.

I will be looking for trends within four main generation demographics: Baby Boomers, Generation X, Generation Y (Millennials), and Generation Z. I am purposefully excluding Generation Alpha from this study to look at generations who are predominantly in some form of schooling past high school or within a career field.

The study will include 10-15 interviews per generation group, with the premise that, at around 10 interviews, I will start reaching my saturation point or have enough information to start seeing trends within each group. Each interview will start with three screener questions that will determine the course of the interview:

- How often do you go online to communicate with a brand?
- What are your general feelings toward artificial intelligence?
- Have you used an A.I. chatbot before? (Note:

the definition of an A.I. chatbot will be given to establish clarity on the subject.)

If an interviewee answers no to Question 3, they will be asked one follow-up question before being dismissed from the interview process: “What is the main reason for not using an A.I. chatbot before?” This question is used to give a deeper understanding of why different members of each generation group avoid the use of A.I. chatbots – i.e., do they prefer other media channels, or do they have some hesitancy around A.I. in general? These interviewees will then be allowed to leave the interview, and their numbers will not factor into the 10-15 needed to reach a saturation point.

For interviewees that say they have used an A.I. chatbot before, they will then be asked a series of baseline questions to establish initial trends among generational groups. See Appendix Table 1 for a list of baseline questions.

From here, interviewees will share their screens to record the interaction with a test A.I. chatbot to identify how different generations interact with the chatbot in real-time through various scenarios. Here, I’ll be looking for pain points, success, moments they would quit the interaction, etc.

The scenario will consist of each interviewee completing various tasks for the fictitious company HelpCare and its A.I. chatbot, Cassie. I am choosing this industry because of its known complexity of products and services and it’s a service that every generation will use at some point. Scenarios will include asking users to complete tasks like using Cassie to schedule an appointment, check and pay their bill online, and check if insurance is accepted through the company. See Appendix Table 2 for a list of scenarios and tasks.

This study will run over the course of 6 months, allowing time for user testing development, gathering interviewees, interviews, analysis and publishing results.

## **ANALYSIS**

To analyze this data, I’ll use the built-in transcription service through the third-party user interview platform to export what the interviewees said in their

interviews. From there, I’ll group each interviewee’s answers by questions asked to start sorting them within topics such as A.I. chatbot use, positive interactions, negative interactions, etc. From there, I’ll analyze the groupings for commonly used words and phrases to build out the overarching concepts that interviewees in each generation are conveying, i.e., hesitancy of use, killing time when bored, ease versus difficulty of use, etc.

From there, I can synthesize numerical results based on the percentage of themes and concepts among different generational groups – i.e., XX% of Generation Z believe that [concept/theme 1].

## **CONCLUSION**

To conclude, while there have been several research studies on the use of A.I. chatbots for digital marketing communication efforts, there is still a need to understand how different generations use these types of platforms to interact with brands online. This research study will seek to understand that on a deeper level to help future digital marketers better design and implement A.I. chatbot content architectures and strategies to provide more meaningful interactions and relationships between their online users and their brand.

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