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Applications of Chatbots in Marketing: Use Cases, Impacts, Challenges and Drivers

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ABSTRACT

Recent advancements in Machine learning has contributed in the improvements of Artificial Intelligence and gave rebirth to chatbots. Due to the advent of technologies like natural language processing (NLP) and voice-controlled technology, AI chatbots are quickly becoming very popular amongst businesses. Use of Chatbots helps businesses save time and money, gain information, aids business processes, provide personal assistance, save time, increase revenue, and improve user experience. There is a dearth of literature in marketing in this area hence this study was done to understand the application of chatbots in marketing, by studying Use Cases, Impacts, Challenges and Drivers of these applications

Key words: Chatbots, Application in Marketing, Customer Experience, Natural Language Processing, Customer Service Assistant.

1. INTRODUCTION

A chatbot termed as Chatterbot and coined by Michael Mauldin, is an artificial intelligence software which converse via auditory or textual methods. [1] ELIZA was first chatbot invented by Weinzenbaum in 1966. With only 200 lines of codes, it imitated of a psychotherapist. [2] The expansion of chatbot assistants reduces the overhead costs by utilising support staff time. Apart from this, it enables organisations to give a degree of client assistance when live agents are not available. There are two types of chatbots. One, which follows a set of rules and algorithms to respond to commands. The other type is the one that does not rely on rules and algorithms rather it tries to understand the meaning and sentiment of the language with the help of machine learning. [3] The blend of constant connectivity and immediate response is what make the users engage with the chatbots. Chatbots provide assistants and act a help desk similar to a human serving. It acts as a medium to respond to the customers' queries. It

employs four major parameters to increase the functionality and intelligence of the bots: Text classifiers, algorithms, Artificial Neural Networks and NLP (Natural Language Processing). [4].

2. LITERATURE REVIEW

Several papers have been published in the area of chatbots and several technology websites have written about the application of chatbots in different domains for example Emma Ojapuska [5] in her paper focussed on factors that can affect positive or negative outcome that the chatbot has on customer engagement. The paper by Petter Bae Brandtzeg and Asbjorn Falstad [6] talks about the key motivational factors which make people use the chatbot. These motivations are entertainments, social and relational factors and the most recently reported motivational factor is productivity. S. Valtolina et al [7] talks about chatbot based conversational interfaces which helps to exploit natural language used by human beings. It also talks about the application of chatbots in public administration, home automation and health and wellbeing. Darius Zumstein and Sophie Hundertmark [8] talks the use of chatbots in personalised communication and transaction services. It also talks about the use of chatbots in transport services as chatbots can collect and provide data about users and their journey in public transport system. Lakshman and Sulaiman [40] in their study have used the NLP technology which is also used in chatbots in order to propose a model for motivating senior citizens to use digital banking. Nishad Nawaz [41] in his study has depicted how artificial intelligence can be used in the recruitment process in order to reduce if not totally eliminate the human intervention in this process.

3. OBJECTIVE OF PAPER

The customer journey has now become more complex than ever, they have started moving more fluidly between channels. According to a research, chatbots will power 85% of all customer service interactions by the year 2020. [9] A lot

of research has been done on chatbots and its uses in various industries, but limited research has been done on the application of chatbots in marketing. Hence, this paper tries to explore the areas of marketing where chatbots can be used and thus helping in reaching the consumers more effectively. The main objectives of this paper are: (1) Application of chatbots in marketing. (2) Business drivers of chatbots in marketing. (3) Challenges of using Chatbots.

4. APPLICATIONS OF CHATBOTS IN MARKETING

4.1 Customer Experience

Chatbots provide immediate response to the customers; they want quick response to their queries. In some cases, the bot may refer customers to the FAQ page of the site to get some tips that may help in resolving the issues. [10] Chatbots also help customers in collecting necessary information like item they want to purchase, method of payment, mode of shipping etc. Hence making a smooth customer journey. [11] Chatbots also offer 24*7 Customer service support; Customers often need to seek out answers for their important queries at times when the support staff is unavailable. Chatbots provide 24*7-customer support without making customers wait for 'several businesses days. [11] They also help in creating engagement; Chatbots interacts with the customers and inform them about the brands' benefits, discount offers and promotional offers. This helps in creating a connection between the brand and the customers. [12] It keeps the customers happy as an unsatisfied customer will never return to the brand and hence helps in building brand value. [10] They also helps in collecting feedback, as it is a vital task to assess how our customers feel about our service/product/support. Carrying out surveys by go-to method or sending e-mails to customers is time consuming and most of the times ignored by the customers. With the use of chatbots, we can collect feedback when the customer is active on website. It gives more accurate data as the experience is fresh. This data can further be used to improve product/service, refine the knowledge base and enhancing the experience of chatbots. [13].

Use cases of chatbots in customer experience are
a) *Sephora* is the 1st brand to use chatbots in the retail sector. After the success of its basic messenger app, they have introduced two additional features: Sephora Reservation Assistant and Sephora Colour Match. Sephora reservation assistant enables customer to book appointments with the beauty specialists. Sephora color match cosmetics with the outfits using AR (Augmented Reality)

b) *Healthjoy* is a chat-based app that helps to centralize a company's benefits and makes healthcare easier to navigate for employees. The function of this bot is to provide various healthcare options and to lower health insurance costs. It also helps users contact with the doctors, book appointments and many more. [14]

Impacts
a) This have resulted in Sephora's 11% increase in makeover appointments via Facebook messenger chatbot. [15]
b) It has seen that more than 54% customers and 76% of business respondents agreed that chatbots have increased customer experience. The above respondents also agree that AI is changing customer experience for the better. It is also observed from a survey that 74% believed that chatbots provide immediate resolution to customer service support. [16]

a. Digital Marketing

With the advancements in technology, Artificial Intelligence is becoming a go-to for every industry; including Digital Marketing. Chatbots have become a crucial parameter for our Digital Marketing Strategy. Chatbots also help in bridging the gap between sales and marketing. There can be a possibility of huge disconnect between sales and marketing team; marketing team might not know what has to be done to make sales successful or sales team might not know where the prospect is in the marketing funnel. Chatbot bridges this gap by looping everyone involved in the business and bringing sales and marketing on the same page which helps in converting more prospects into customers. [17] Social media is the most preferred platform for advertising and promoting our brand. Chatbots are included as an extension to different social media platforms for initial level enquiries and resolving them. It functions as a brand ambassador on social media platforms. [12]

Use cases of chatbots in Digital Marketing are
a) *Hipmunk* is a platform for travel deals. It created its "Hello chatbot" which helps people in searching and booking flights, rental cars, hotels or packages. It is integrated with Facebook, Skype, Slack etc. This bot tracks customers' location to learn where they are travelling from and then provides great travel deals. It uses casual and friendly language, creating an informal and personalized experience for the customers. It made travel searches very convenient to the customers as they can chat online with their friends and plan their travels simultaneously while using social media platforms.

b) *NatGeo* also used social media platforms to promote its new TV show "Genius" which chronicles the lives of figures like Pablo Picasso and Albert Einstein. The Facebook page of this show exhibited a bot which interacts with the users in the voice of the featured Genius. For example, before the telecast of the show on

Albert Einstein, users interacting with the bot will be connected to Einstein and the bot will be replying with the information about the show and other topics related to Einstein studies. [18]

4.2 Advertising

Chatbot advertising reduces the waiting time of the customers. They reach out to a new lead in a matter of seconds at any time. According to a research, the firm which tried to contact potential customers within an hour of receiving a query were nearly 7 times as likely to convert a lead. Chatbots can also reach the local people with offers as businesses can utilise chatbots to drive a great amount of local traffic by giving them the deal-based offers that can help the business to increase their sales rate and increase localized brand awareness. [19]. Chatbots can also help in B2B advertising as they can help in giving demos to the client, probe for interest, and book an appointment with the client so that sales team can focus on closing the deal. [20]

Use case of Chatbots in Advertising are:
a) *Hospitality advisor* chatbot was bundled with an article of Taj providing a discount of 15% on account of Mother's Day celebrations on the websites of Economic Times. The chatbot was bundled with the aim to complement the branded content.
b) *Investment advisor* chatbot was also bundled with an article of ULIP (Unit linked insurance plans) on the websites of economic times. It asked users questions to access their requirements and risk profile. [21]

Impacts
After bundling chatbots with the advertisements, there was a significant uplift in brand awareness and engagement rates. The total engagement rate was increase to 3.3% and CTR to 0.9% which were all above the benchmarks. It also created a strong mobile impact which showed an uplift of more than 14% across brand awareness, consideration and favourability for the audience. [22]

4.3 Sales

Nurturing leads is an important but time-consuming job of a company's marketing strategy. Chatbots also help our customers move them down the sales funnel. It assists the users during their buyer's journey. [23] For any business, it is the result that matters at the end of the day and Chatbots act as a perfect vehicle to drive the business via digital means. They are intelligent enough to understand the interests of the customers and increase their desires. Once their desires are increased, customers tend to make purchases. After the purchase is done, bots can also be used to update the customer regarding their purchase order, shipping and tracking. It can also be used to up-sell similar products. According to a study,

with the implementation of chatbots, sales is increased by 35 times. [24] Chatbots are very helpful for e-commerce websites too. It knows the preferences of our customer and offer them the products/services they love. This improves the relationship with the consumers and also develop a feeling of trust among them. This is in turn causes customer retention and helps in up-selling and cross-selling as well. [25]
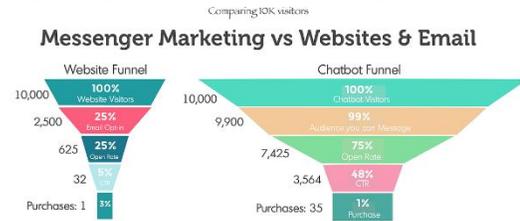

Figure 1: Comparison of messenger marketing, websites, and email [24]

Use cases of chatbots in Sales are:
a) *H&M* is a fashion company world-wide. It has launched its Chatbot named 'H&M Chatbot'. Its purpose is to assist customers during their shopping journey. It suggests the customers with the best possible outfits and direct them to the online stores which will be aligned according to their purchase desires. [26] The bot first asks customers to select photos clothes of their choice and then asks to select of their personal styles like classic, casual, preppy etc. and then create personalised outfits for the customers. [27] With the help of H&M bot, the brand was able to cut cost on customer support service and uplift the sales over the past years [28]
b) *Amtrak* is the rail transport provider in US. Customers made phone calls for making reservations and hence the website was getting huge traffic daily. To make the process quick and cost-effective, Amtrak introduced its chatbot 'Julie'. [28]

Impacts
a) It has been observed that the business implementing chatbots have experienced 20% increase in sales. Orders were also increased by 300% and the businesses got a return of 250%.
b) According to report of 'Chatbots Magazine', businesses can save up to 30% of their cost with the implementation of chatbots. [29] [15]

4.4 Brand Visibility

Chatbots are the point of contact for the customers. It streamlines the common features of the business on the company's website and therefore make customers aware of the company's business and products/services. Immediate customer support feature of the chatbot gives businesses an advantage of controlling the voice of their brand and ensuring that right message is delivered to its audience. [30] A business can grow and connect with their target audience only when their audience know about the products, services and goals of the business. Chatbots help attract customers by making the

business goals clear to the audience. [31] Integration of chatbots brings a positive impact on the brand that not only helps in increasing the brand visibility but also improves on customer retention rate. [32]

Use Case of Chatbots in Brand visibility
a) Ubisend developed an interactive chatbot for *Unilever*. Brand mascot, Monkey, was used for the chatbot that surprised its customers by responding accurately to queries. The bot was developed with the aim to increase brand awareness and to generate funds for Red Nose Day. It not only responded to queries, but it also sends a daily joke to the customers. This helped Unilever in increasing brand visibility. [33]

Impact
a) It was observed that chatbots increased the brand visibility significantly. Traffic on the websites of the brands got increased heavily. There was also an increase in new leads as new customers and hence increasing new opportunities placed 70% of the orders by 170% in 3 months. [18]

5. BUSINESS DRIVERS OF CHATBOTS

There are various factors, which are responsible for growth and success of business, such as favourable conditions and smooth processes. Key drivers, which are encouraging the use of chatbots across different industries, are: (1) Increasing the capability of the business, as more users are spending their time on messaging platform then social media, companies will need to shift their mobile strategy towards chatbots. (2) Increased use of messaging platform across mobile devices, messaging is driving the consumption of data. (3) Advancement of technology in Artificial Intelligence and Natural Language Processing, chatbots are not using keywords matching to function but they are more dependent on machine learning models, advanced NLP and data availability, which makes the operation of chatbots much smoother and effective. [34] (4) Increase in the demand of self-service, nowadays customers want quick solution of their queries, and they no longer want to wait even for minutes for a customer service executive to solve their queries. (5) Maturing chatbot platforms, chatbot technology is becoming more popular and mature. Chatbots are now coming with easy to grasp drag-and-drop interfaces allowing business users to build and manage chatbots themselves. [35]

6. FUTURE SCOPE OF CHATBOTS

Chatbots have lot of potential in future, chatbots can become more personalised so that they can answer more specific queries of users. Chatbots can also utilise the impact of AI advancements. They can also utilise deep learning to learn quickly and become more effective.

7. CHALLENGES OF USING CHATBOTS

Despite the considerable growth in chatbot technology, application of chatbot in marketing industry still has many challenges such as: (1) Understanding user emotions and sentiments, user problems must be identified from voice and breaking them into meaningful intent and responding with appropriate voice reciprocating the right emotions, it involves training the chatbot with real human voice so that they can respond in right tone and right pitch. (2) Security of chatbot, while planning the chatbots it must be guaranteed that only pertinent information must be asked, stored and transmitted safely over the web. (3) Designing a vernacular chatbot, making chatbots polyglot requires more human translators instead of machine, vernacular chatbots require a common standard language that is still not available. [36] (4) Viability of information in chatbots, it is very important for a chatbot to advance with important information, yet in addition be prepared to convey the brand personality to the intended interest group. (5) Integrating chatbots with the context, building, developing and maintaining the memory of bots that offers personalised responses is a big challenge for the companies. [37].

8. LIMITATIONS OF THE RESEARCH

Chatbots have many applications in marketing, but in this research paper, only few applications were covered in various areas of marketing. Chatbots can also be used in various other industries like healthcare, E-commerce, legal, transport etc. Chatbots are extensively used in all these industries have. These applications are not covered in this research paper.

9. CONCLUSION

Chatbots are steadily bringing lot of changes in customers' day-to-day lives, as they have various applications across various industries such as e-commerce, retail, banking, travel, healthcare etc. Chatbots can reach to enormous group of audience through messaging apps and be more effective than people. The services that chatbots deliver are much differing, from giving significant lifesaving wellbeing messages to checking the climate gauge to buy new garments. Cost of developing a chatbot is now getting cheaper so more and more industries are wishing to adopt the chatbots. According to a research, 43% of the consumers said they prefer dealing with an actual person and 34% said that they would use chatbots to connect to an actual person. [38] Most of the commercial chatbots are working on the platforms created by Amazon Lex, Google cloud natural language API, Facebook messenger, Skype and IBM Watson etc. [39]
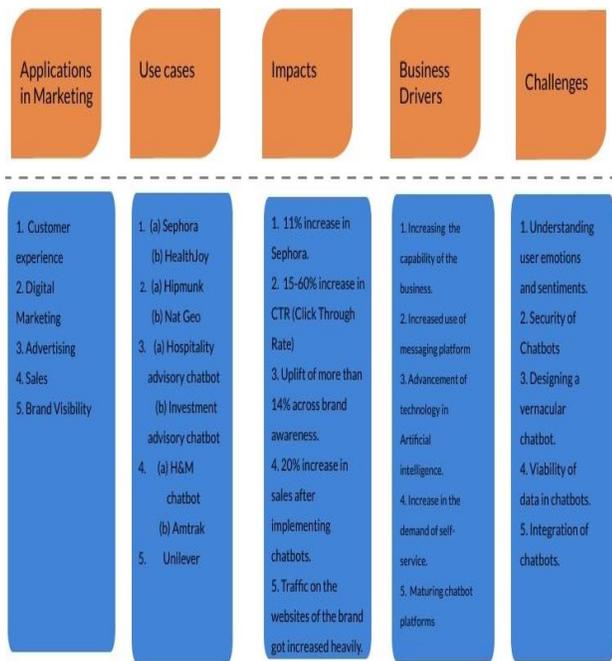
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