

DOI: 10.5281/zenodo.19114143

REDEFINING MARKETING COMPETENCIES IN THE AGE OF AI CHATBOTS: A FRAMEWORK FOR STRATEGIC HUMAN-AI INTEGRATION

Mahadi Hasan Miraz¹, Mohammad Tariq Hasan², Narishah Mohamed Salleh³, James Bakul Sarkar⁴, Mohammad Faridul Alam⁵, Geetha Nadarajan⁶, Puteri NE Nohuddin⁷

¹Associate Professor, Industrial Engineering Department, Istanbul Atlas University, Istanbul, 34408, Türkiye
Email: mahadimiraz1@gmail.com; hasan.miraz@atlas.edu.tr

²Associate Professor (Accounting), School of Business and Economics, United International University (UIU), Dhaka, Bangladesh, Email: tariq@bus.uuu.ac.bd

³Lecturer, Department of Business Analytics, Sunway University, Malaysia
Email: narishahm@sunway.edu.my

⁴Professor, School of Business & Economics, United International University, Bangladesh
Email: jmssarkar@bus.uuu.ac.bd

⁵Associate Professor, Department of Accounting, American International University, Bangladesh, Dhaka, Bangladesh, Email: mf.alam@aiub.edu

⁶Faculty of Business, Sunway University, Malaysia, Email: geethan@sunway.edu.my

⁷Faculty of Business, Higher Colleges of Technology, Sharjah, UAE, Email: pnohuddin@hct.ac.ae

Received: 06/02/2026

Accepted: 05/03/2026

Corresponding Author: (Dr Mahadi Hasan Miraz, mahadimiraz1@gmail.com)

ABSTRACT

Purpose: This study aims to explore the emerging skills gap among marketing professionals in the context of AI-based chatbot technologies and develop a comprehensive competency framework that supports effective customer interactions using chatbots. The research addresses a significant gap in current marketing practices: the growing need for professional skills to strategically manage and integrate chatbot systems. *Design/Methodology/Approach:* This study employs a qualitative, exploratory approach based on semi-structured interviews with 21 marketing professionals from various sectors, including retail, finance, technology, and education. Participants were selected through purposive sampling to ensure that they represented the management and operational levels of digital marketing. Data were analysed using NVivo software, following (Miraz, Annamalah, & Sham, 2025; Miraz, Sham, & Annamalah, 2025) a six-step thematic analysis approach, to identify recurring patterns and conceptual relationships. *Results:* This research suggests that chatbot marketing skills shortages are multidimensional, extending beyond technical knowledge to include creative, ethical, analytical, and adaptive learning capabilities. The findings indicate that marketers frequently lack the integrated skills necessary to effectively design, implement, and evaluate chatbot-based campaigns. The study proposes two new theoretical contributions: Chatbot Marketing Competency Theory (CMCT), which explains how the integration of balanced skills improves chatbot marketing performance, and Human Skills-AI Integration Theory (HASIT). *Originality/Value:* This research makes a unique contribution to addressing the underexplored problem of a lack of skills in chatbot marketing, a rapidly emerging yet understudied area of digital marketing and AI management. The chatbot marketer model provides a new framework for understanding partitioned

and academic.

KEYWORDS: Marketing, Chatbot Marketer Model, Skill Gap, Strategic Integration, Human-AI Collaboration.

1. INTRODUCTION

The digital era has presented a significant challenge for various industries, including the communication and marketing sectors (Tafesse & Wood, 2024). The lack of intellectual investigation into the marketing talents of chatbots by marketing industries drives this study endeavour (Amankwah-Amoah, Abdalla, Mogaji, Elbanna, & Dwivedi, 2024). 'Chatbots marketing skills' denote the comprehension and recognition of Chatbots marketing and its utilisation within creative industries (Rachman, Ausat, & Rijal, 2024). Additionally, the literature is limited in its investigation of the gaps in Chatbots' marketing skills within the communication industry (Proença & Martins, 2023; Rather, 2024). It is crucial to augment the understanding of skill gaps within the communication profession in academic and industry contexts (Ahmad Tajuddin, Bahari, Al Majdhouh, Balraj Baboo, & Samson, 2022).

This study presents a model supported by empirical evidence that can help companies and the education sector meet new requirements. The articles mentioned above are grounded in the existing body of literature that has examined the marketing skills requirements of chatbots for both business and academia. This paper critically examines the literature on expertise in various marketing sectors, with a particular focus on the context of Chatbots.

2. LITERATURE REVIEW BASED ON SKILL SHORTAGE

2.1. Taking Up Industrial Demands

A significant discourse in the marketing field recognises the presence of a 'Chatbot skills gap' and affirms the necessity for training (Hussain, Khan, & Malik, 2024). There has been a demand for research in the field of marketing to enhance its applicability to the present problems and issues faced by the industry, as well as to address the concerns expressed by practitioners (Kunz & Wirtz, 2024). Additionally, AI marketing needs to tackle the skills shortage, and the advent of digitalisation has prompted numerous transformations within the area (Huang & Rust, 2021). The incorporation of chatbot technology advancements in education has been a process that has required considerable time within academia (Elbanna & Armstrong, 2024). To bridge the gaps in training and abilities, individuals often seek to enhance their knowledge by participating in short courses offered by professional marketing organisations (Schinke et al., 2024).

2.2. Chatbot Marketing Skills Gaps

The existing body of literature indicates a scarcity of studies investigating the deficiencies in chatbot marketing abilities across the communication sectors (Chiu, 2024). Highlight the absence of scholarly research about using social networking sites by business-to-business (B2B) enterprises (Radebe, Verkijika, & Neneh, 2024). Wach et al. (2023) emphasise the importance of possessing specialised expertise in chatbot marketing abilities across many industries, highlighting the potential negative consequences that may arise without such a skill set. Chatbots' marketing capabilities needed flexibility, wise futureproofing, market research, and relationship building (Levantino, 2023).

Ascertaining the consensus among professionals in the communication business regarding the essential chatbot marketing abilities that should be acquired (Wach et al., 2023). Sitopu, Khairani, Roza, Judijanto, and Aslan (2024) advocate for additional investigation into the critical skill sets required to navigate modern marketing practices. They emphasise the significance of marketing academics comprehending and addressing the conceptual, theoretical, and educational needs of marketing practitioners. Rakowska and de Juana-Espinosa (2021) emphasise identifying and cultivating distinct skill sets among marketing practitioners. The essential Chatbots marketing skills that require refinement and an empirical foundation to effectively address these specific skill deficiencies (Petrescu & Krishen, 2021).

2.3. Using Chatbots Marketing Education to Fill Talent Shortages in the Sector

Research consistently indicated a predominantly positive influence on students and teachers (Ali, Murray, Momin, Dwivedi, & Malik, 2024; Allil, 2024; George & Wooden, 2023; Ilieva et al., 2023). The discipline of marketing is influenced by the rise of tools such as social media and mobile applications, rather than being the main force driving the development of these technologies to enhance marketing tactics (Marino-Romero, Palos-Sánchez, & Velicia-Martín, 2024). It is worth noting that Twitter and Facebook have become popular among educators who utilise these platforms to teach marketing concepts. In addition, they have emphasised the adverse repercussions on graduates and their ability to proficiently handle social media campaigns when issues about chatbot marketing skills are not sufficiently addressed in the educational setting. Mogavi et al. (2024) state that developing technology is exerting an effect on

marketing education's curriculum and teaching methods.

2.4. Integration Of Theories

This study relies on the Chatbot Marketing Competence Theory (CMCT), which explains how chatbot-driven marketing success requires technological competence, strategic marketing understanding, and human communication competence. Combining these talents may help marketers build and manage AI-based consumer contact systems more effectively than specialising in one area. Adding AI and conversational interfaces enhances digital marketing frameworks, as noted by Lobo *et al.* (2018). In the age of AI-enabled communication, professionals must employ creativity, empathy, and language accuracy to humanise digital encounters while understanding data analysis and automation technologies. According to CMCT, investing in a balanced experience—including both technical and soft skills—will enhance the efficacy of chatbot engagement, customer satisfaction, and brand loyalty.

Human-AI Symbiotic Theory (HAIST) examines how human ingenuity and AI are transforming digital marketing (Taha Kandil, 2025). This theory posits that the poor integration of human intelligence (strategic thinking, ethics, and contextual understanding) with machine intelligence (automation, data-driven analysis, and adaptive learning) results in chatbot marketing skills being lacking. Based on human capital theory and sociotechnical systems theory, HASIT emphasises that successful businesses promote human resource and AI growth through learning, experimentation, and ethical innovation. Through dynamic cooperation, marketers may use computational accuracy and emotional intelligence in their ads. The theoretical framework of the research is CMCT and HASIT, which explain individual competence growth and organisational adaptability in the age of intelligent marketing systems.

3. METHODOLOGY

This qualitative exploratory research included semi-structured interviews with 21 chatbot marketing experts. To understand chatbot marketing skill gaps, capabilities, and obstacles, participants were randomly chosen. Following Braun and Clarke (2006) paradigm for pattern identification and chatbot marketer model development, NVivo software was used to thematically analyse the data. Appendices B and C provide the detailed interview

schedule and discussion questions.

3.1. Population And Sampling

Digital marketers, customer interaction experts, and AI-powered marketing operations specialists from retail, banking, technology, and education were studied. These individuals were selected for their expertise in marketing chatbot implementation and management. The author selected participants to learn more about chatbot marketing abilities, problems, and competencies using purposive sampling. Twenty-one marketing executives, digital strategists, communications officers, and AI professionals from varied organisations and industries were picked. No new topics arose throughout the analysis; hence, the sample size was adequate to reach data saturation.

Participants were approached through professional networks and LinkedIn, and they were required to have at least two years of experience in digital marketing and chatbot expertise. The research aims and ethical criteria were explained to all participants, who gave informed permission. It was essential to include a diverse and targeted sample of chatbot marketing experts to accurately reflect real-world practices and efficiency goals in AI-powered marketing contexts.

3.2. Data Collection and Interpretation

The study examined the skill gaps and needs of marketing professionals in chatbot-based marketing contexts using a qualitative research approach. Semi-structured interviews enable for in-depth investigation of participants' own experiences, perspectives, and insights while allowing for debate of emergent ideas. Interviews assessed participants' knowledge of chatbots, marketing responsibilities, implementation obstacles, and their viewpoints on skill development and training.

Twenty-one applicants were selected for their expertise in digital marketing, consumer interaction, or AI-based marketing. Purposive selection ensured variety across industries (retail, banking, education, technology), organisation size, and function. This sample approach aligns with exploratory research by including individuals with experience in chatbot marketing.

Participants were approached via LinkedIn and institutional emails and provided with an information sheet that described the research's goals, confidentiality, and their rights to participate in the study before data collection. Pre-interview informed permission and Institutional Review Board ethical clearance were obtained. Interviews were conducted

online (via Zoom or Microsoft Teams) and in person, depending on the participant's availability and geographic location. To ensure data accuracy, each 45–60-minute session was audio-recorded with permission. Also recorded were nonverbal clues and contextual observations in field notes.

The primary research inquiry to be examined through interviews is as follows:

- ❖ In what ways do people's limited Chatbots marketing skills relate to their overarching marketing strategies, both operational and strategic?
- ❖ Creating a clearer conceptual framework allowed us to hone our study topics. By making these adjustments, we aimed to address specific information gaps and refine our research focus.
- ❖ How does Chatbot marketing work for your particular communication business, and how do you see it developing over the next year and beyond?
- ❖ Regarding chatbot marketing, have you seen any particular areas where your company or the companies you work with fall short?
- ❖ In the realm of chatbot advertising, what are the most pressing concerns?

Appendices B and C provide the detailed interview schedule and discussion questions.

3.3. Data Interpretation and Analysis

To preserve participants' meanings, interview data were transcribed verbatim. To organise, code, and thematically analyse transcripts, NVivo was used.

The six-step Brown and Clark (2006) theme analysis technique was used to interpret:

- a. Reading transcripts repeatedly helps you recognise unique ideas.
- b. Initial coding selected and coded significant words, phrases, and ideas using short, descriptive codes.
- c. Group relevant codes into broad categories to find themes and developing trends.
- d. Check themes for internal consistency and data accuracy.
- e. Name subjects to define each group conceptually.
- f. To improve comprehension, write themed tales using quotations.

To validate coder dependability, a second researcher repeated and verified coding. Meaning disagreements were explored and resolved by consensus. To ensure coding uniformity, a codebook was created with code definitions, inclusion criteria,

and typical excerpts.

The researcher focused on both overt (explicit) and hidden meanings and patterns during interpretation. When participants stated "difficulty using analytical tools," they categorised it under "analytical and critical thinking," whereas "lack of empathy in chatbot communication" was categorised under "conversational skills." Descriptive interpretation (what participants said) was followed by analytical abstraction (model meaning).

The third step of interpretation was thematic mapping, which graphically depicted concepts to develop a chatbot marketer model. This conceptual model revealed how six competence domains—technical, conversational, strategic, analytical, collaborative, and learning—relate to chatbot marketing success.

3.4. Accuracy And Reliability

To enhance the validity and reliability of the results, several strategies were used, including data analysis, member validation, and audit trail documentation. Participants were invited to review their interview summaries to ensure accuracy and reliability. The researcher also kept detailed notes during the coding process to record analytical decisions and reflections on them.

4. DATA ANALYSIS

4.1. Opening Questions About Chatbot Marketing Skills Shortage

This section introduces the opening questions of the chatbot marketing skills shortage questions. The responses from the participants revealed their perceptions on how chatbot marketing can prepare for managing marketing careers in an increasingly tech-driven profession. The responses reveal differences in the respondents' views on the subject matter. A common theme was found that company size is from 30 to 2000. Three themes were identified, and provide excerpts of the study participants based on each figure for the theme as follows:

4.2. Companies' Background and Activities

Figure 2 presents the Demographic and company background of the interviewee. These include reputation management, executive of vehicle manufacturing, research and development manager of innovative technologies, marketing manager, advertising and promotion manager, brand manager, promotion manager, director, consultant, tourist executive, operations manager, chief executive officer, strategy and consultancy, retail

district manager, and marketing executive.

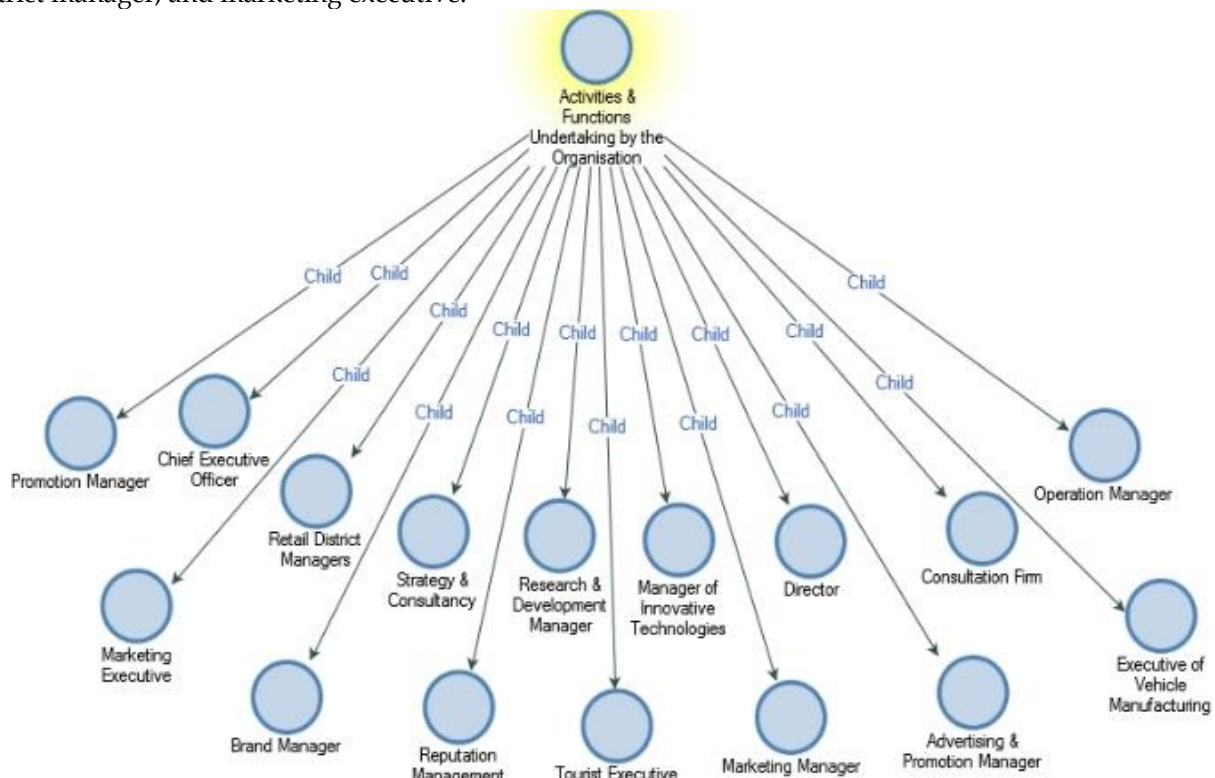


Figure 2: Activities & Functions of the Individual Interviewee.

Source: Authors Own Creation.

4.3. Profession Of the Individual Interviewee

Figure 3 presents the profession and individual background of the interviewee. These are Marketing

Manager, Marketing and Sales, Marketing Officer, Operation Manager, Marketing Executive, Corporate Communications & Public Affairs, Marketing and Communications.



Figure 3: Profession Of the Individual Interviewee.

Source: Authors Own Creation.

4.4. Geographic Location Interviewee

Figure 4 presents the Geographic location of the

interviewee. These are Malaysia, Asia, Japan, Australia, USA, China, Germany, Switzerland, Singapore, Finland, Canada, Taiwan, South Korea,

Denmark, Vietnam, Sri Lanka.

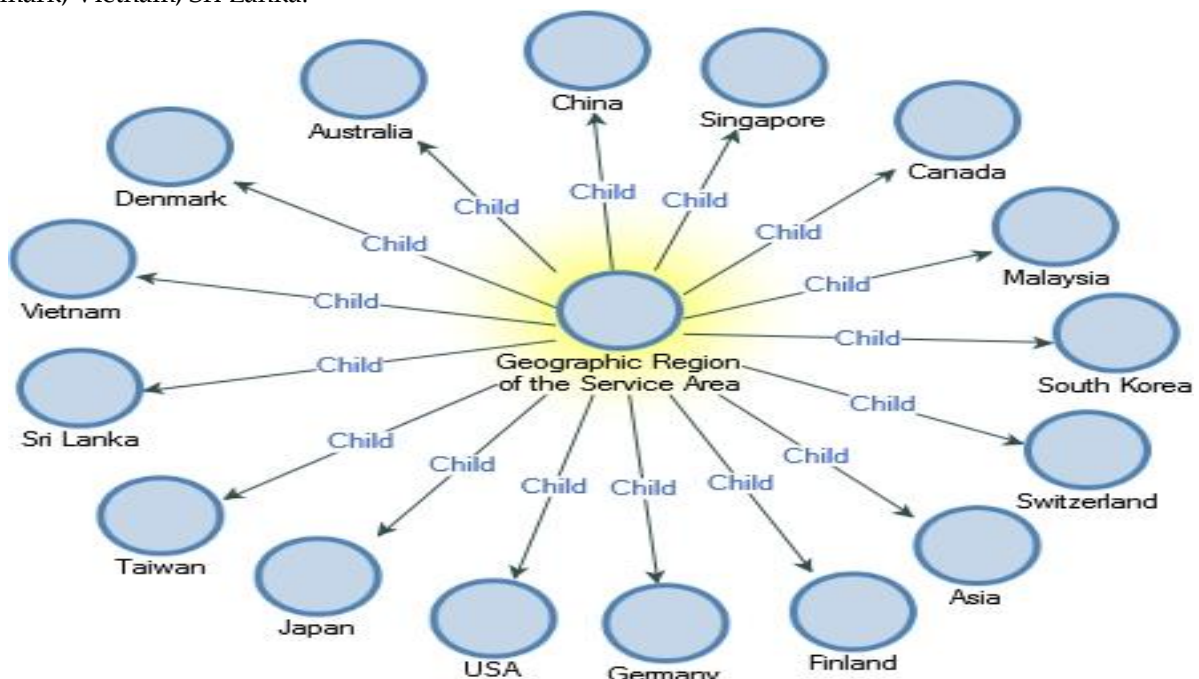


Figure 4: Geographic Location of Interviewee.
Source: Authors Own Creation.

4.5. Introduction Of Chatbot Marketing

This section queries the introductory questions of the chatbot marketing skills shortage questions. The responses from the participants revealed their perceptions on how chatbot marketing can prepare managing marketing for careers in an increasingly tech-driving profession. Ten themes were identified, and it provided excerpts of the study participants based on each figure for the theme as follows:

4.6. Current State of Chatbots Marketing

Figure 5 presents the current state of the chatbot marketing effort. These are the marketing strategy, social media posts, branding and product promotion, consumer forecasting, customer engagement, customer feedback, customer awareness, sales and marketing, flight rebooking, and promotional campaigns.

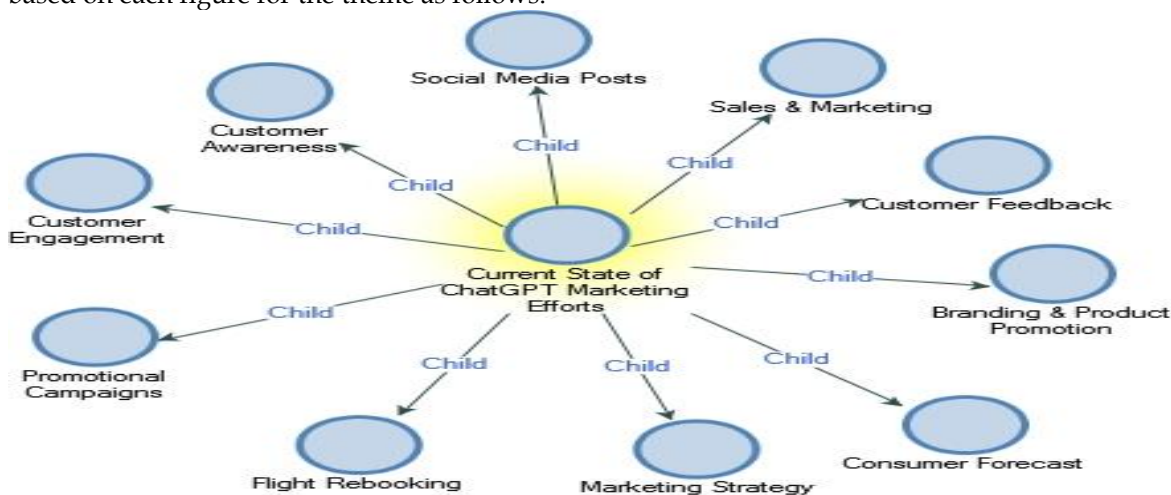


Figure 5: Current State of Chatbots Marketing Effort.
Source: Authors Own Creation.

4.7. The Company Chatbots Marketing Tactics

Figure 6 presents chatbot marketing tactics employed by firms. These are 24/7 response, content

creation, SEO optimization, creating customer surveys, pay-per-click advertising (PPC), public relations, social media marketing, Chatbots

marketing, personalized recommendations, automated email marketing and automated social media marketing, maximising search engine optimization, audience research and creating customer surveys, audience research, product

recommendation, content creation, automatic poster generation, Chatbots marketing, social media marketing, email marketing and website optimization.

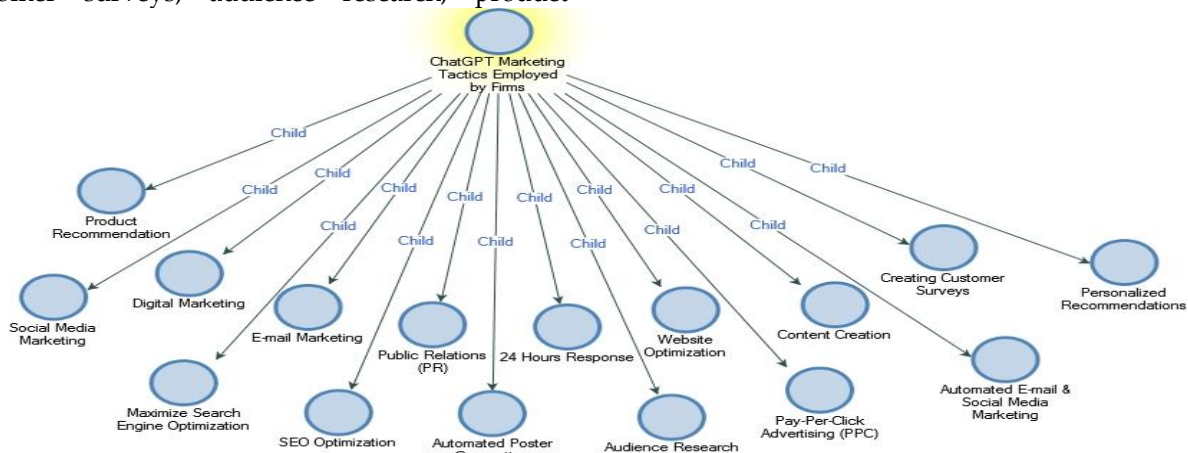


Figure 6: Chatbots Marketing Tactics Employed by Firms.
Source: Authors Own Creation.

4.8. The Existing Consume-Based Marketing Methods

Figure 7 presents consume-based marketing methods. These are hybrid, event marketing, online presence, content marketing, email marketing, search

engine optimization (SEO), pay-per-click advertising, social media advertising, online employment source, social media marketing, one-on-one service, influencer marketing, partnerships and alliances, traditional advertising, customer loyalty programs, data analytics.

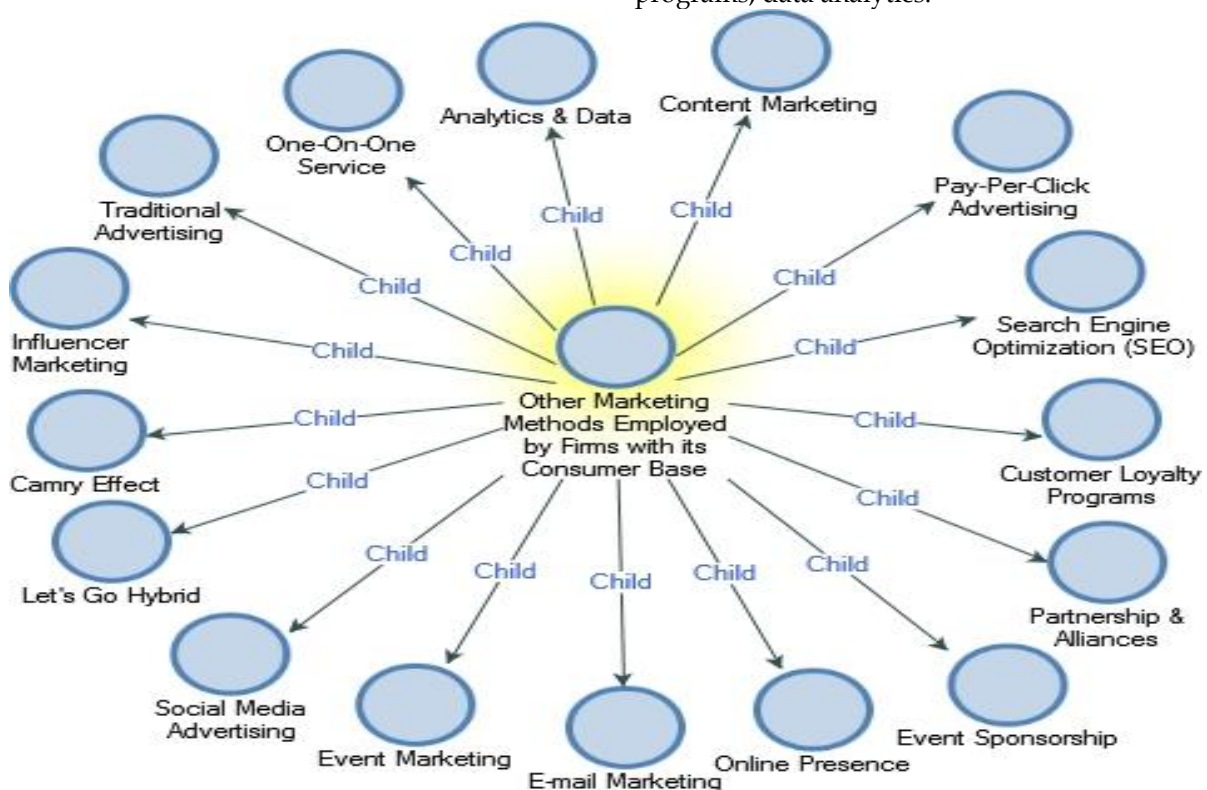


Figure 7: Consume-Based Marketing Methods.
Source: Authors Own Creation.

4.9. Available Options for Marketing in Companies

Figure 8 presents Marketing options. These are

mail marketing, telemarketing, direct mail (letters, postcards, catalogues), social media, billboards, commercials, YouTube ads, personalization, customer service and content marketing.

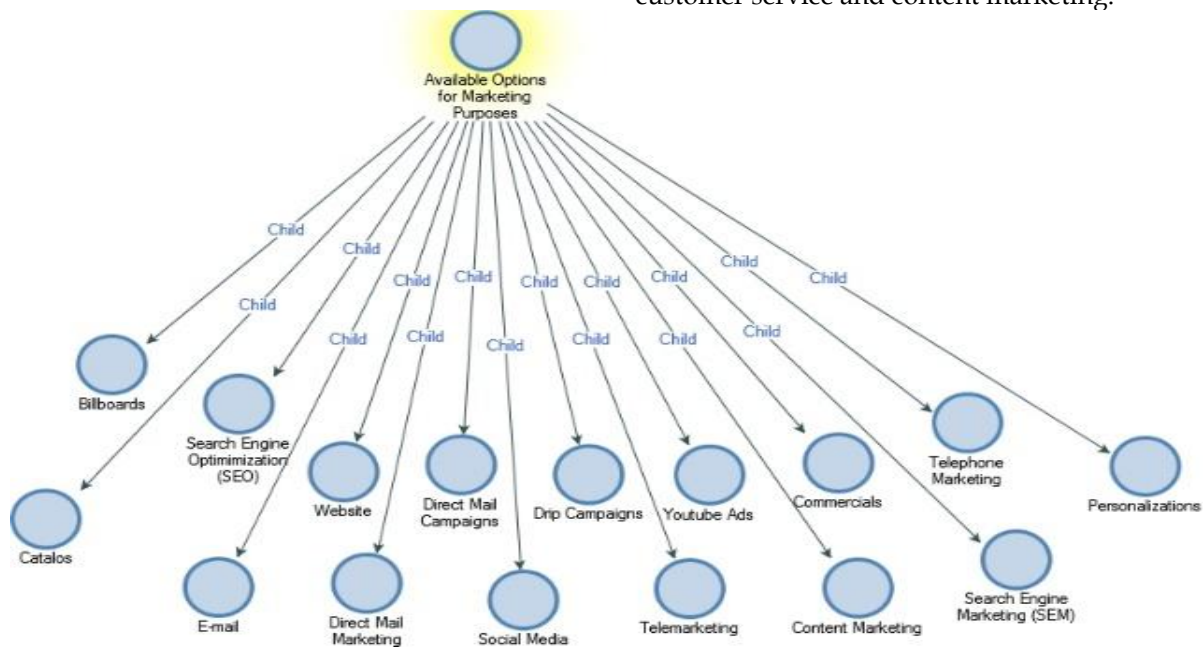


Figure 8: Marketing Options.
Source: Authors Own Creation.

4.10. Knowledge Management Strategies

Figure 9 presents the basic methods of knowledge management. These are AI marketing, return on investment (ROI, customer engagement, data-driven insights, efficiency and automation, adaptability and scalability, cost savings, customer satisfaction and

retention, ai-driven marketing, key performance indicators (KPIs), click-through rates (ctr), customer acquisition cost (CAC), customer lifetime value (clv), increased revenue, improved customer engagement, enhanced customer retention, cost reduction, conversion rate optimization.

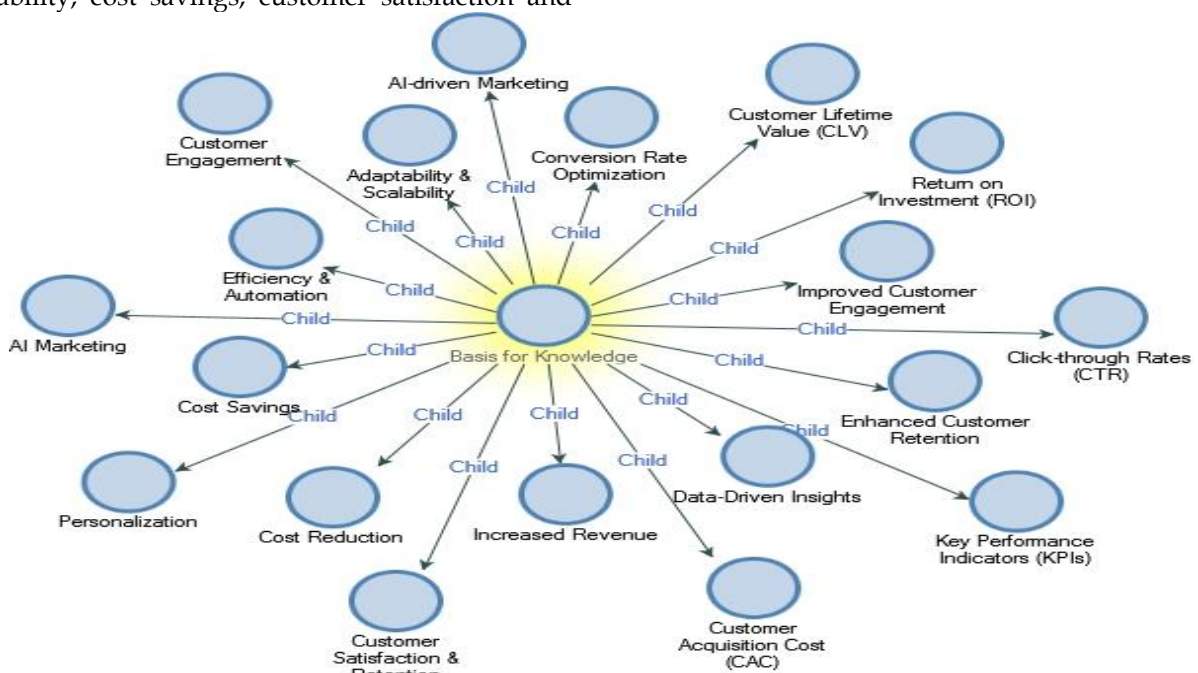


Figure 9: Basis For Knowledge.
Source: Authors Own Creation.

4.11. Approaches In the Management of Chatbots Marketing Operations

Figure 10 presents the ways that are the basis for knowledge management. These are Chatbots marketing operations, solution providers, proficient content creation, marketing professionals, interactive

content, online advertising, effective administration, strategic advertising, facility management, technology integration, responsibilities and duties, facilitating conditions, outsourcing options, operation management, marketing strategies, efficient and effective utilization of Chatbots.

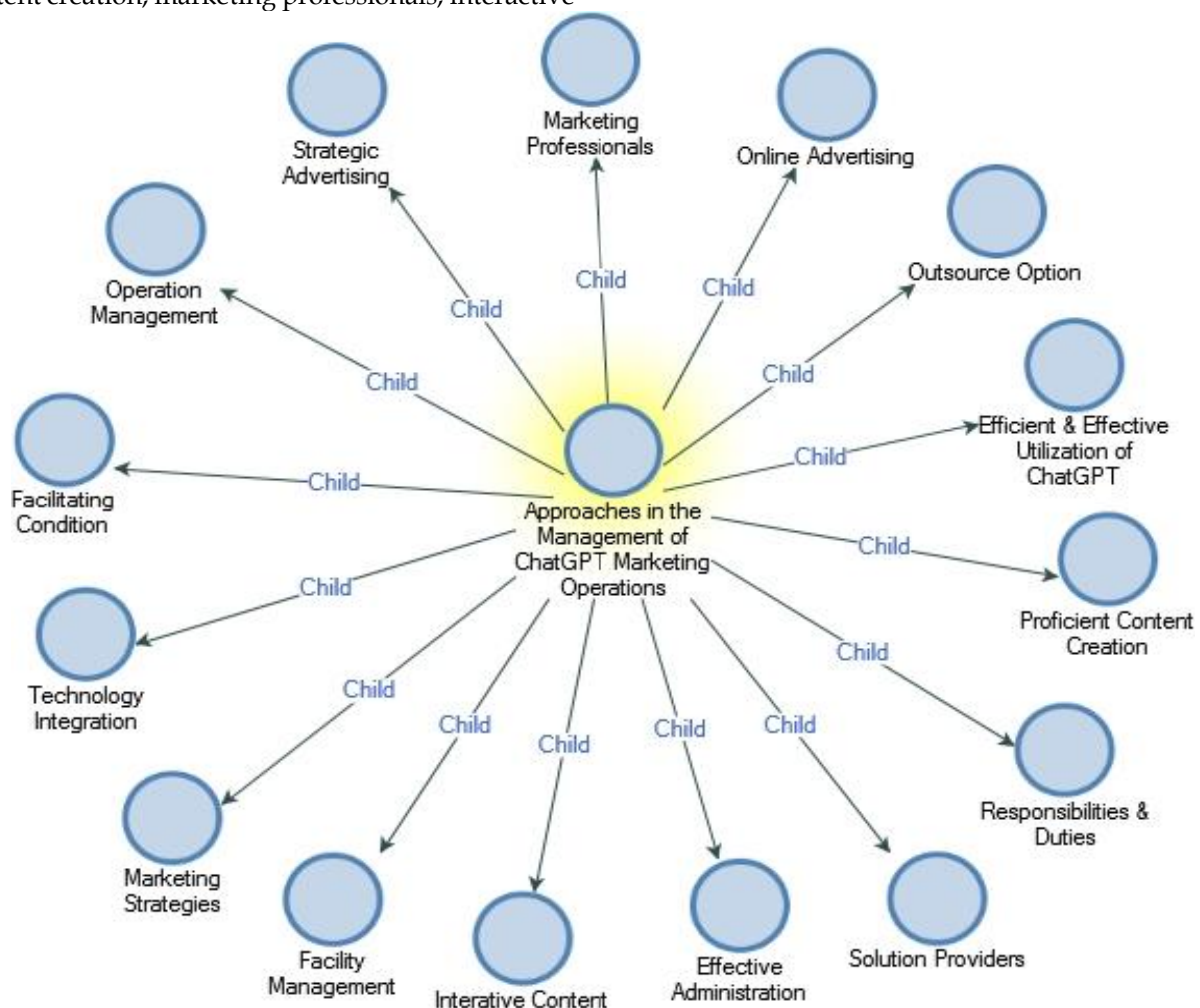


Figure 10: Approaches In the Management of Chatbots Marketing Operations.

Source: Authors Own Creation.

4.12. Objectives Of the Organisation Concerning Chatbots Marketing

Figure 11 presents the primary objectives of individual organisations concerning Chatbots marketing. These are trustworthy campaign content creations, enhancing customer experience, integration of artificial intelligence, personalised marketing strategies, reduced response time, various

marketing tactics, informative interactions, increased brand loyalty, sustainable tourism, responsible travel practices direction to waste management, minimizing carbon emissions associated with travel, proactive, conservation, community and economic development, cultural integration, reduce production cost, increase productivity, right market segment, large customers management, cost efficiency and innovative brand image.

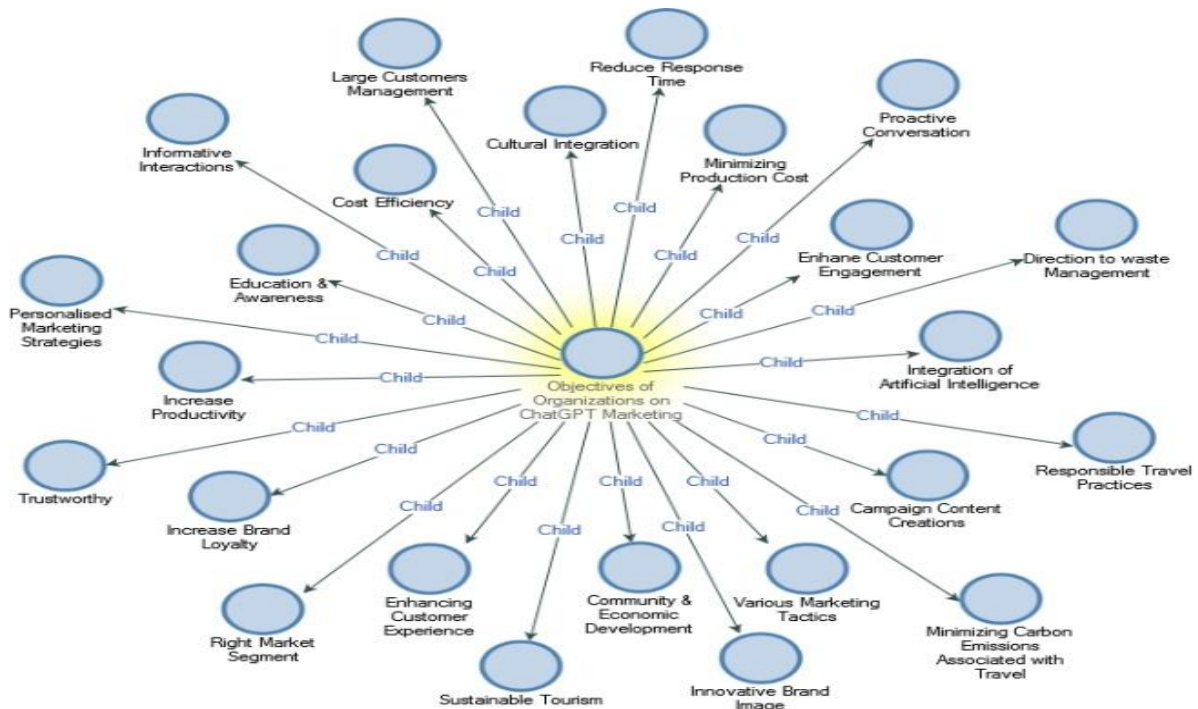


Figure 11: Objectives Of the Organisation Concerning Chatbots Marketing.
Source: Authors Own Creation.

4.13. Outlook For the Upcoming Twelve-Month Period

Figure 12 presents the Outlook for the upcoming twelve-month period. These are the digital marketing tools, ai-based marketing methodology, Chatbots-based business operation, refining our Chatbots marketing efforts, enhancing the overall

customer experience, integration of Chatbots, identifying outcomes and objectives, raise, profitability, marketing efforts, customer-centric service, innovative approach, data-driven marketing, personalized campaigns, client requirements, revenue growth, expansion of services, and emerging platforms and technology.

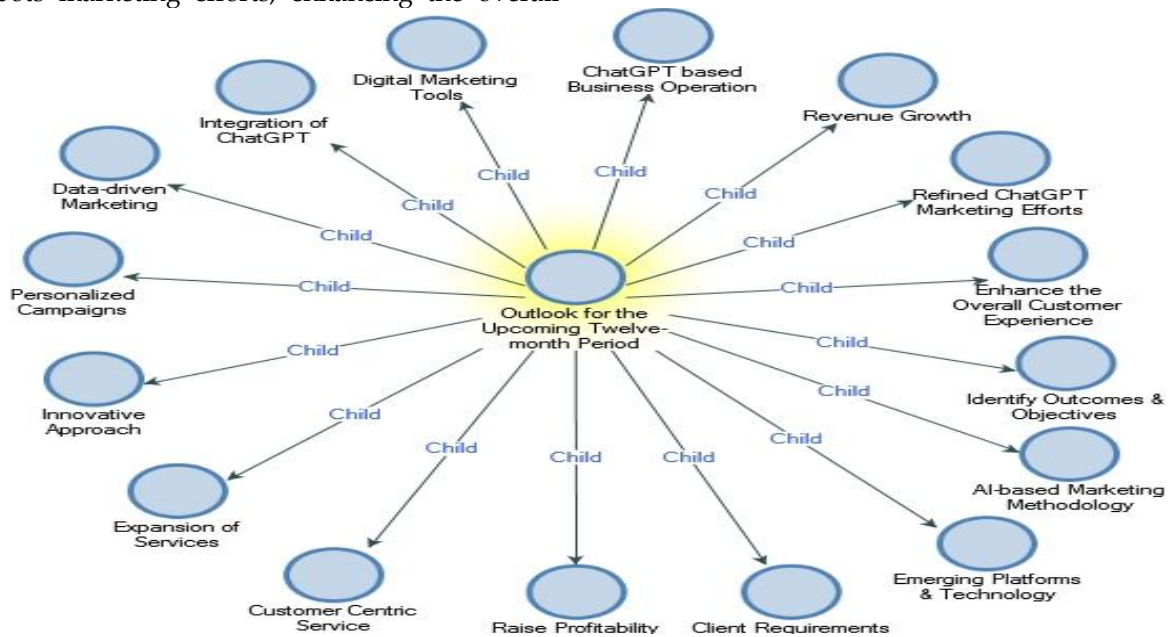


Figure 12: Approaches In the Management of Chatbots Marketing Operations.
Source: Authors Own Creation.

4.14. Projected Timeframe for the Upcoming Years

Figure 13 presents the projected timeframe for the upcoming years. These are three months, 24 months, two years, 1-5 years, three, four, and five years.

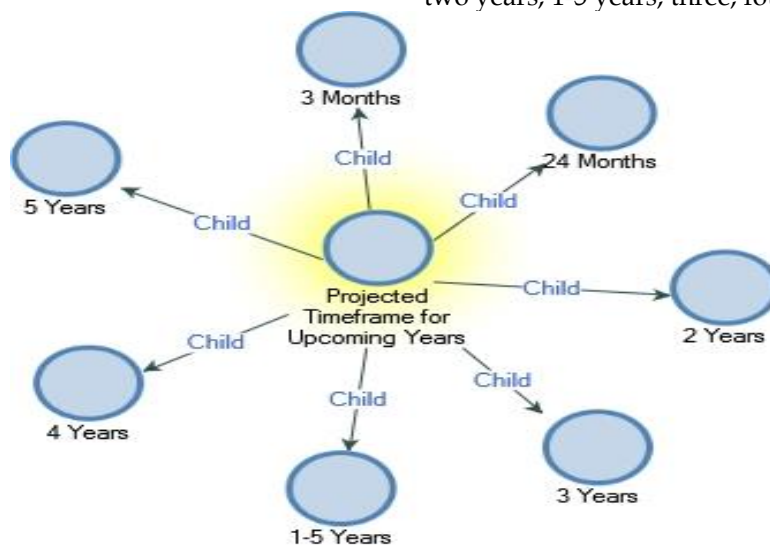


Figure 13: Approaches In the Management of Chatbot Marketing Operations.
Source: Authors Own Creation.

4.15. What Are the Tools Used to Develop Your Chatbots Marketing

Figure 14 presents the Outlook for the upcoming twelve-month period. These are the experts in the relevant field, computers and internet to access Chatbots, customer relationship management (CRM), Salesforce, HubSpot CRM, Microsoft dynamics, vendors could be Google, Cisco or

Chatbots organisation, AI and natural language processing (NLP), adobe creative cloud suite, Content management systems (CMS), email marketing software, social media management tools, analytics and SEO tools, marketing automation, analytic tools, social media applications, canva and adobe after effects, handphone, TensorFlow, PyTorch, Chatbots platforms, and ai language models.

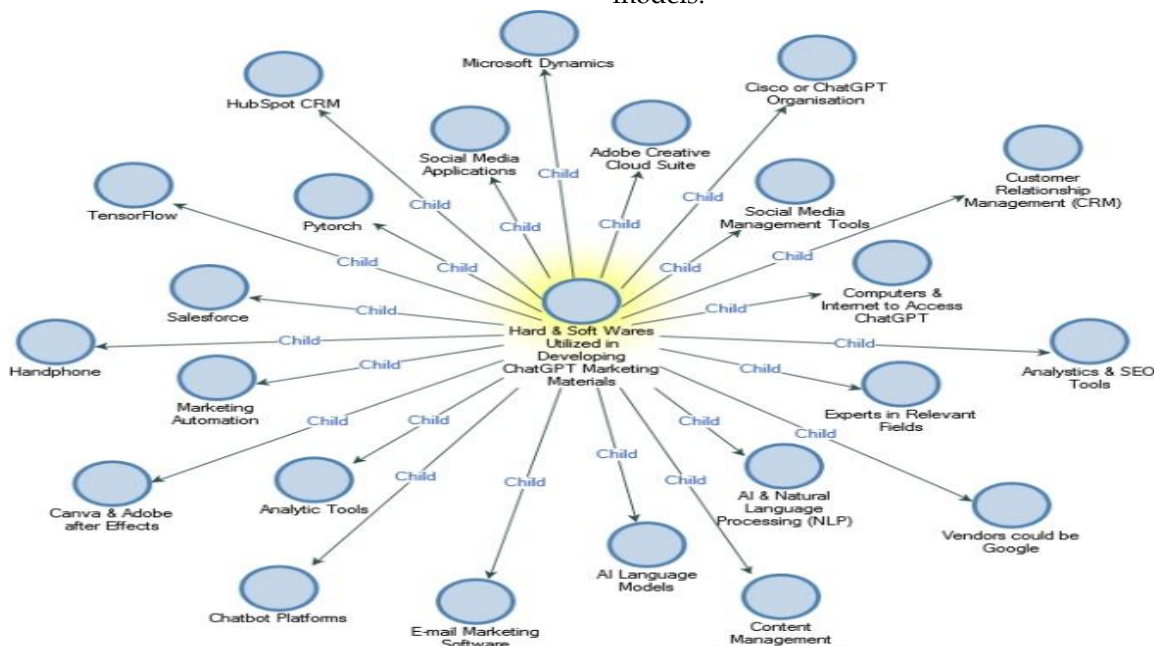


Figure 14: Tools Used to Develop Your Chatbots Marketing.
Source: Authors Own Creation.

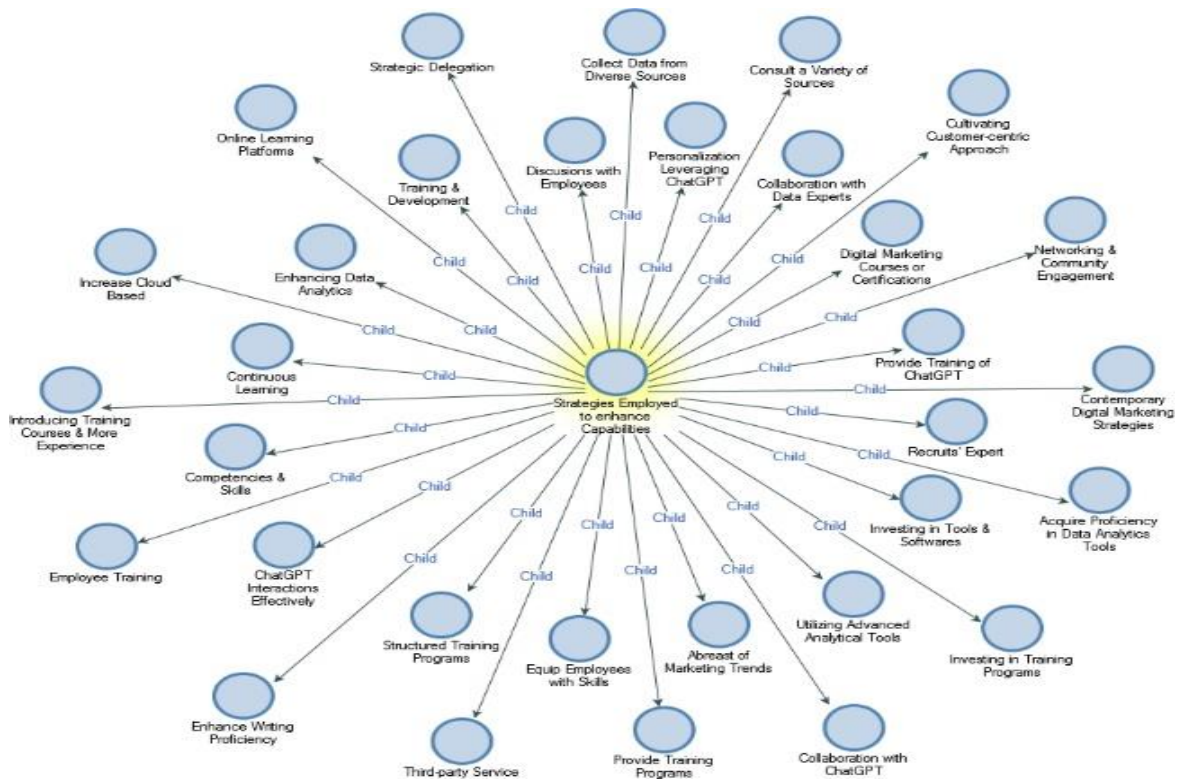


Figure 16: The Strategies Intended to Enhance Chatbots's Marketing. Source: Authors Own Creation.

4.19. What Strategies Do You Intend to Employ to Enhance Chatbots' Marketing Capabilities

Figure 17 presents the strategies intended to enhance Chatbots' marketing capabilities. These include marketing, which is not proactive, and programming knowledge, as well as a lack of

proficiency in content creation, video production, and cybersecurity expertise, all of which are crucial for safeguarding digital assets. Additionally, there is a lack of international workers, critical thinking, and auditors, which are also essential for safeguarding digital assets.

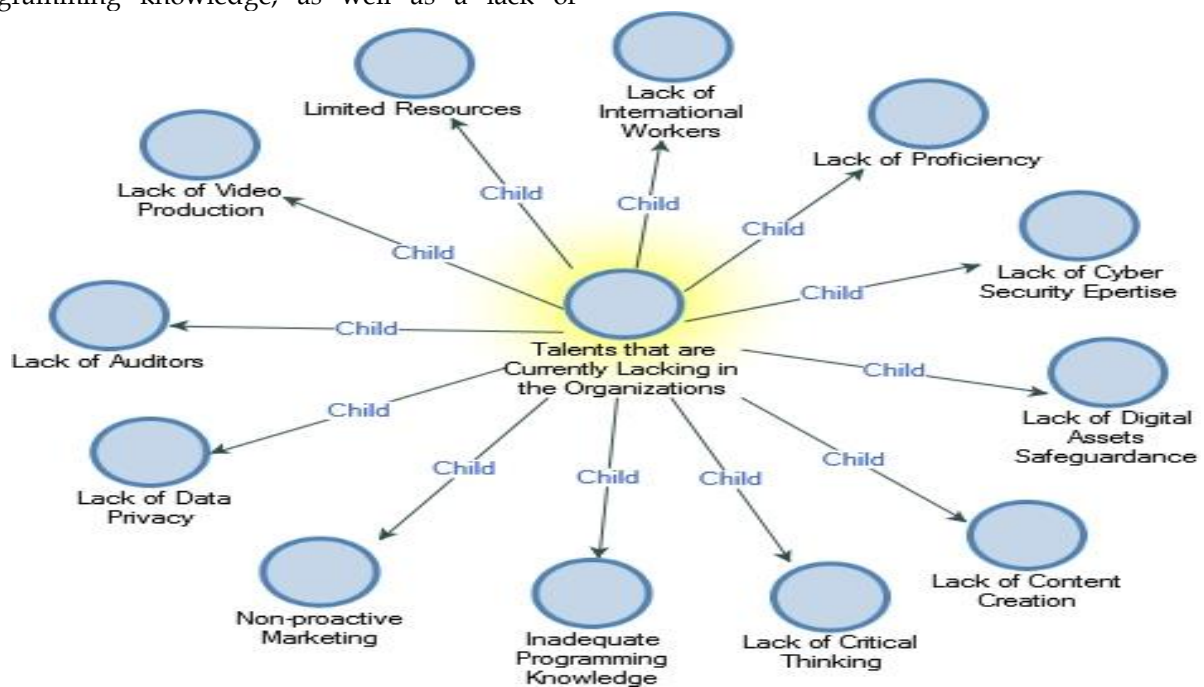


Figure 17: The Strategies Intended to Enhance Chatbots's Marketing. Source: Authors Own Creation.

4.20. The Identified Skill Deficiencies That Require Attention in the Foreseeable Future

Figure 18 presents the skill deficiencies that require attention in the foreseeable future. These are digital literacy, active learning strategies, complex problem-solving, critical thinking and analysis,

creativity, skill gap analysis, data analytics, lack of proficiency in it, programming, lack of time frame, teamwork capabilities, problem-solving, cloud computing, supply chain management, ethical considerations, creative and innovative mindset, crisis communication, and cybersecurity.

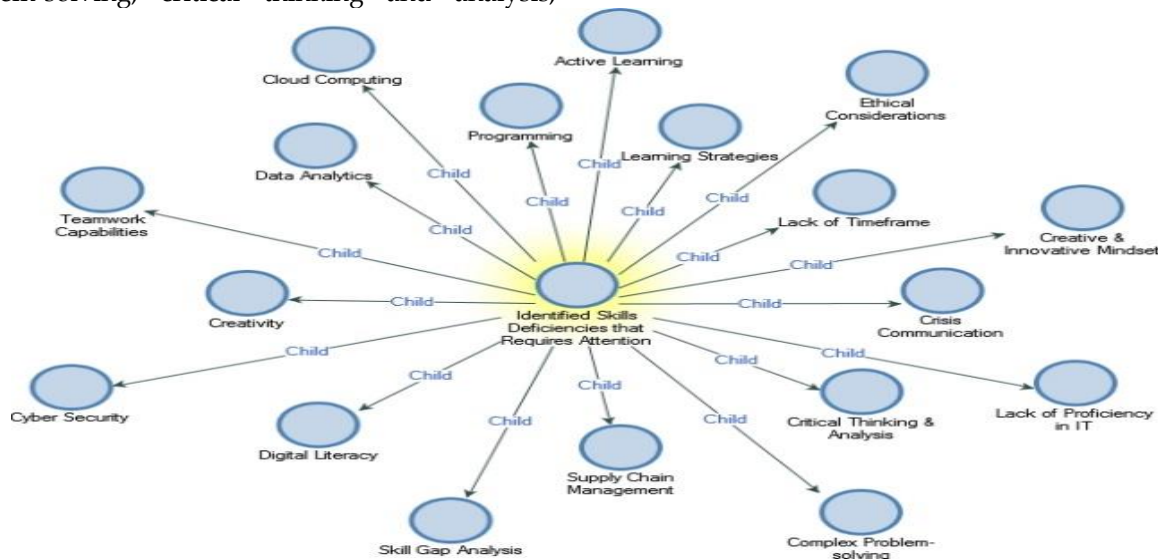


Figure 18: The Strategies Intended to Enhance Chatbots's Marketing.
Source: Authors Own Creation.

4.21. The Engagement of External Agencies to Address Any Skills Deficiencies Within Its Workforce

Figure 19 presents the engagement of external agencies to address any skills deficiencies within its

workforce. These include chatbot marketing, collaboration with external agencies, mitigating skill deficiencies, skills within our workforce, external agencies, consultants, effectively upskilling our team, digital training, and identifying skill deficiencies.

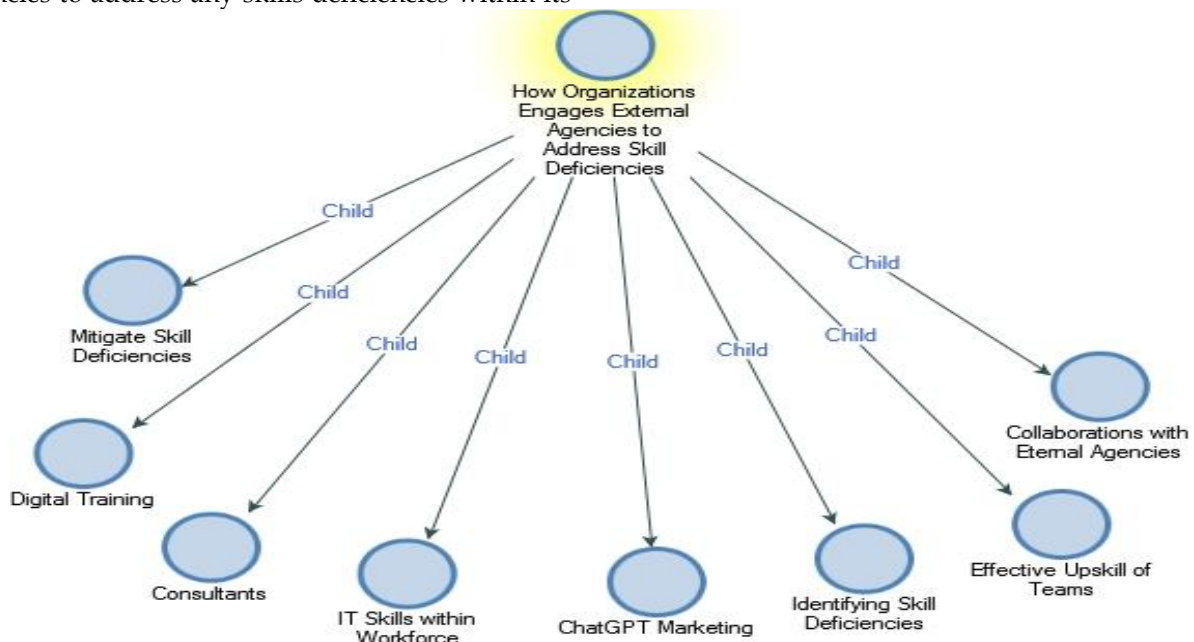


Figure 19: Engagement Of External Agencies to Address Any Skills Deficiencies Within Its Workforce.
Source: Authors Own Creation.

4.22. Chatbots Integration or Prefer to Continue Relying on an Agency

Figure 20 presents the variables of Chatbot integration or prefers to continue relying on an agency. These are better proactive marketing, depending on an outside agency, customization, alignment, cost control, long-term investment, efficiency, scalability, novel outlook, cultivating our

talents internally, balanced approach, cultivating talent internally, relying on, cultivate our talents internally, cost-effective hiring, depends on budget, the challenge of operating ethically, train talents internally, develop an organizational, sustainability adaptability and internal cultivation.

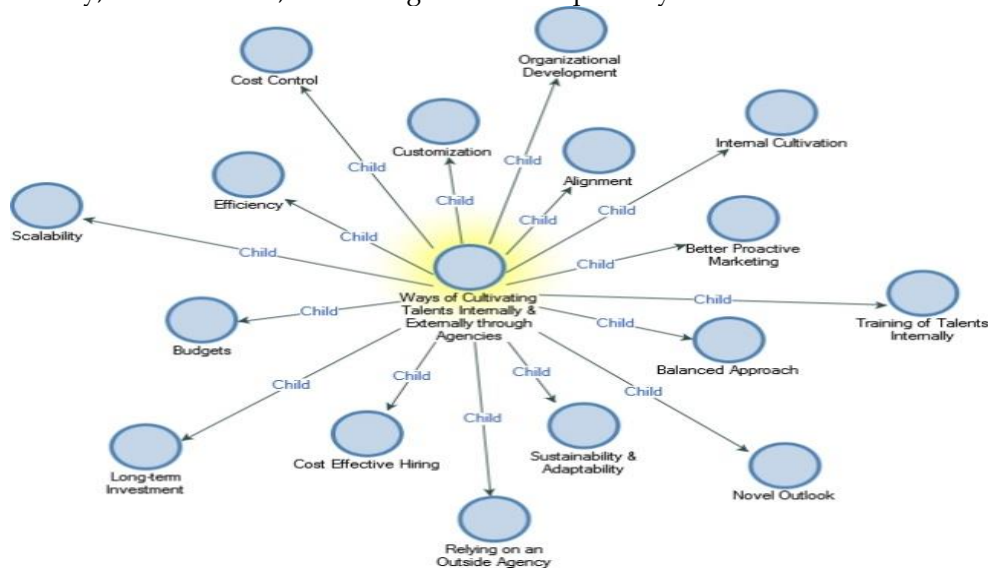


Figure 20: Engagement Of External Agencies to Address Any Skills Deficiencies Within Its Workforce. Source: Authors Own Creation.

4.23. Individual Skill Preference

Figure 21 presents the variables of individual skill preference. These are teamwork, technical competencies, supply chain management, leadership and management, supervision of teams, strategic objectives, efficient operational processes, particular categorical leadership, decision-making, enterprises

engaged, proficiencies in customer service, relationship management, comprehension of client requirements, knowledge on Chatbots, ai expertise, data analytics, job competencies, organisational competencies, marketing communication, focusing on ethical concerns, proper decision making, training, empathetic strategy, and innovation.

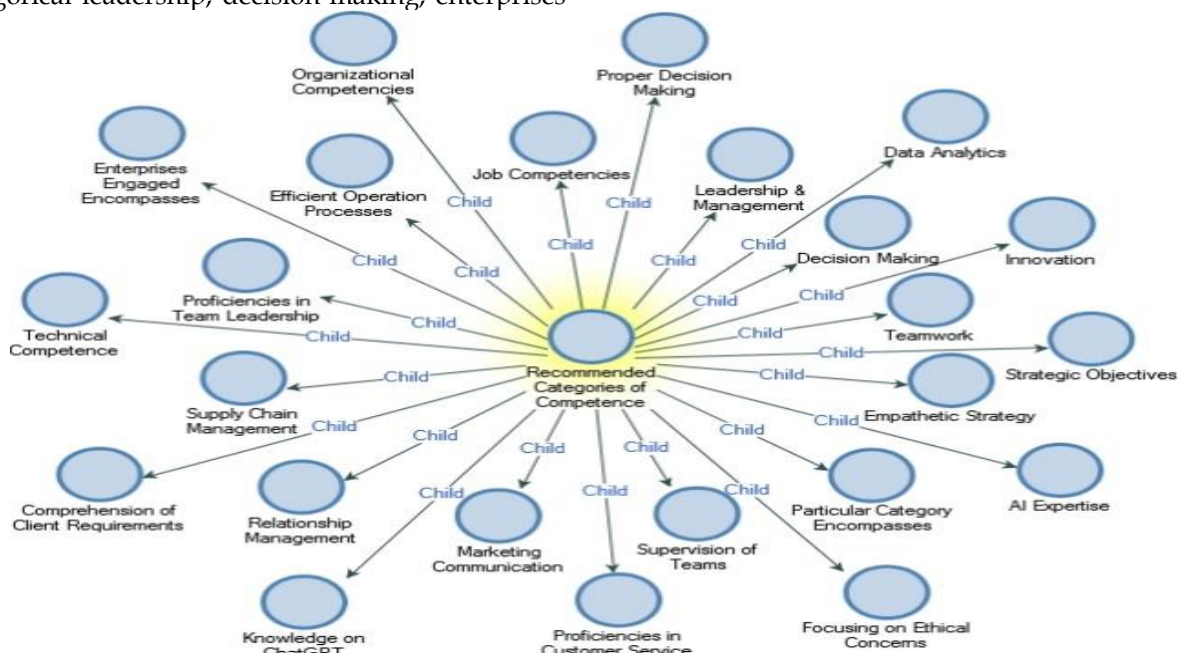


Figure 21: Individual Skill Preference. Source: Authors Own Creation.

4.24. What Else Competencies Are Cultivated in Chatbot Marketing

Figure 22 presents the variables of additional competencies cultivated in chatbot marketing. These are communication, leadership, integrity, enhancing natural language understanding, and AI marketing

strategy. Competencies in leadership, computer proficiency, analysing communication skills, providing frequently asked questions, data analysis, cybersecurity recommendations, and analytical thinking skills are the key components of chatbot marketing.

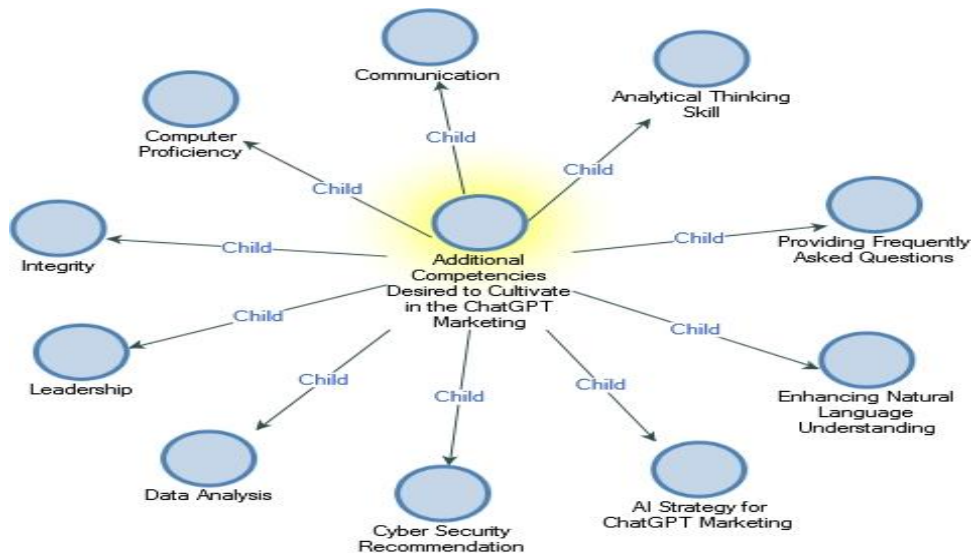


Figure 22: Additional Competencies Cultivated in Chatbots Marketing.
Source: Authors Own Creation.

4.25. More Remarks or Observations to Be Made

Figure 23 presents the remarks or observations to be made. These are managing sensible information, customer psychology, ethics of a marketing manager,

harnessing Chatbots, observation, changing marketing methods, transparency about chatbot use, revolutionising consumer engagement, fostering brand loyalty, privacy, data security, transparency and ethical issues.

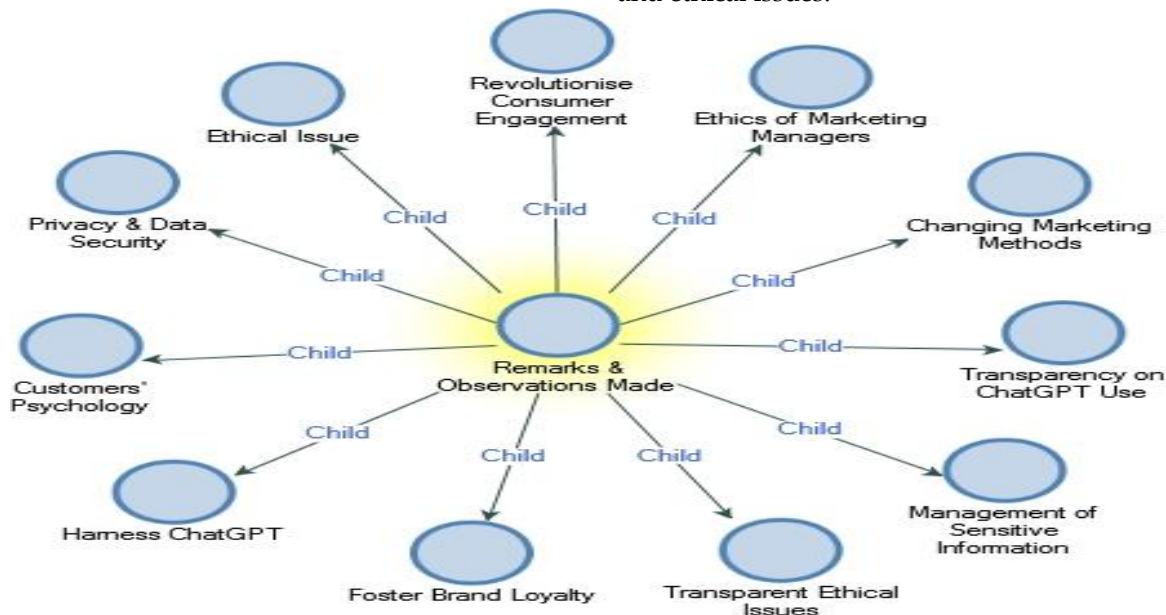


Figure 23: Additional Competencies Cultivated in Chatbots Marketing.
Source: Authors Own Creation.

Based on the interview data, this study constructs the initial code, as presented in Table 1.

Table 1: Initial Code.

Main Theme	Sub-Theme / Code	Description	Illustrative Quote (Example)
1. Technological Competence	Understanding of Chatbot Tools	Participants discuss knowledge of chatbot platforms, APIs, and automation workflows.	"We use chatbots but only a few of us know how to integrate them with CRM systems."
	AI and NLP Literacy	Awareness of AI concepts like intent recognition and natural language processing for customer dialogue.	"I know what AI does, but I don't understand how the chatbot interprets human queries."
	Data Analytics Skills	Ability to interpret chatbot performance metrics and user engagement data.	"We get data reports, but most marketers don't know how to analyze the patterns."
2. Conversational Design Skills	Script Writing & Flow Design	Ability to design natural, human-like conversation flows for chatbots.	"The hardest part is making the bot sound human but still efficient."
	Emotional Intelligence in Dialogue	Balancing automation with empathy and tone in chatbot responses.	"Chatbots must show empathy, especially in customer complaints."
	Personalization Ability	Customizing chatbot responses based on user data and preferences.	"Our customers expect chatbots to know their history and preferences."
3. Strategic Integration	Marketing Strategy Alignment	Integrating chatbots into overall marketing and customer experience strategies.	"Chatbots are still treated as side tools, not as part of the marketing strategy."
	Customer Journey Mapping	Using chatbots across touchpoints in the buyer journey.	"We only use bots for FAQs, but they could guide customers through the purchase process."
	ROI and Performance Evaluation	Measuring chatbot impact on sales, engagement, or customer satisfaction.	"We haven't developed KPIs to assess chatbot performance."
4. Analytical & Critical Thinking	Decision-Making Based on Data	Using chatbot data insights to make marketing decisions.	"We have data dashboards but no one uses them for strategic planning."
	Problem-Solving Approach	Identifying and fixing errors in chatbot interaction flows.	"Sometimes the bot gives wrong answers, and we struggle to debug it."
5. Human-AI Collaboration	Skill Integration & Adaptability	Balancing automation with human oversight in marketing communication.	"AI can handle routine tasks, but human creativity is still needed."
	Ethical and Responsible AI Use	Awareness of ethical design, bias, and transparency in chatbot communication.	"We need to ensure that our chatbots don't manipulate or mislead customers."
6. Training and Learning Needs	Upskilling & Continuous Learning	Need for regular training programs and AI literacy workshops.	"We're learning as we go – there's no formal chatbot training for marketers."
	Educational Curriculum Gap	Lack of chatbot-related content in marketing courses or certifications.	"Universities teach marketing but not how to work with chatbots or automation tools."

Table 1 involves the meticulous categorisation of raw interview transcripts. Participant themes, words, and expressions were recognised and coded into basic ideas that evolved into larger analytical topics during open coding. Coding revealed six major topics of conversation, including chatbot marketing knowledge, abilities, and obstacles. Technological, narrative creation, cognitive integration, analytical and critical thinking, human-AI interactions, and teaching and learning demands are examples. Participants emphasised the importance of technological capabilities, including chatbot platforms, APIs, AI, and NLP, in the first category. Marketers reported minimal chatbot integration and system analytics expertise, suggesting a severe technological readiness gap. The second category, "Conversational Skills," showcased the human side of chatbot marketing through engaging, empathetic, and personable chats. Participants noted that

establishing emotionally intelligent and tailored chatbot conversations requires inventiveness in language and a deep understanding of the audience.

The final area, "Strategic Integration," covers chatbot administration and organisation. Participants highlighted that chatbots are generally utilised alone rather than in a marketing plan. They emphasise linking chatbot projects with customer journey mapping and performance measurement for demonstrable marketing benefits. The fourth category, "Analytical and Critical Presentation," stressed data-driven decision-making. Many companies gather chatbot interaction data, but few marketers can analyse it to get insights or improve. Members of the fifth category, "Human-AI Collaboration," recognised that chatbot marketing success requires a combination of automation, human innovation, and ethics. Interviewees stated that AI technologies should complement human

business insights, and that machine communication must be transparent and honest to build confidence. Many participants reported a lack of formal education or organised professional development opportunities connected to chatbot technology, which was a methodological concern. Many wanted targeted upskilling and AI-based marketing in academic programs.

The original code table helped the researcher group compare thoughts, establish category linkages,

and construct themes. The table indicates that chatbot marketing capabilities are lacking in technical, creative, analytical, and strategic domains, all of which are driven by the need for continuous learning and ethical collaboration between humans and AI. These early scripts formed the basis of the Chatbot Marketer Model, laying the groundwork for bridging the digital skills gap in contemporary marketing.

Table 2: Summary Of Codes and Themes.

Core Theme	Subthemes / Categories	Summary of Meaning
1. Technological Competence	Understanding of chatbot tools and integration - AI and NLP literacy - Data analytics and dashboard use	This theme reflects the technical knowledge and digital fluency required to operate chatbot systems effectively. Participants highlighted limited understanding of AI-driven systems, lack of technical training, and challenges in interpreting chatbot performance metrics.
2. Conversational Design Skills	Script and dialogue flow creation - Emotional intelligence in chatbot tone - Personalization of customer interactions	This theme emphasises the creative and human-centred competencies involved in crafting engaging chatbot dialogues. Participants discussed the challenges of designing natural, empathetic, and context-aware responses.
3. Strategic Integration	Alignment with marketing strategy - Customer journey mapping - ROI and performance evaluation	Strategic integration integrates chatbots into marketing strategies.
4. Analytical and Critical Thinking	Decision-making through data insights - Problem-solving and process improvement	Analytical and evaluative reasoning are needed to draw conclusions from chatbot data. Participants felt marketing decision-making lacked analytical understanding and data utilisation.
5. Human-AI Collaboration	Balancing automation with human oversight - Ethical and responsible AI usage	This subject highlights how AI and marketing creativity are evolving. Participants stressed the role of AI in human decision-making. Transparency, trust, and honesty are also important for digital marketers.
6. Training and Continuous Learning	Professional upskilling programs - educational curriculum development	These subject highlights systemic gaps in chatbot marketing training between academia and industry. Several participants suggested developing systematic skills and implementing chatbot-related university marketing programs.

Table 2 summarises the qualitative data investigation by grouping the first open codes into six primary topics that encapsulate chatbot marketing skills. Technical expertise, story design, strategic integration, analytical and critical thinking, human-AI interaction, and ongoing training and development are all areas that are lacking in chatbot marketing. Digital marketers must master each topic to design, manage, and analyse chatbot-driven customer contact projects. The overview encompasses the technical, strategic, human, and ethical aspects of AI marketing.

The first subject, technical intelligence, covers marketers' chatbot platforms, design, and NLP skills. Several panellists noted that technological incompetence hinders the inclusion and improvement of chatbots. Second, conversational talents encompass the creative and human-centred skills required to construct intelligent, emotionally charged chatbot encounters. Technology, knowledge, and communication design often clashed when it came to creating meaningful client

conversations.

Strategic Integration, the final topic, examines how to effectively utilise chatbots within a marketing strategy. Participants stated that chatbots must align with corporate goals, define client journeys, and measure progress to be strategic. The fourth pillar, Analytical and Critical Thinking, stresses marketers' chatbot data analysis and consumer contact. Even with the availability of data analytics technology, participants indicated that marketers lack the analytical skills to turn data into practical decisions or improve performance.

Human-AI Collaboration, the fifth theme, strikes a balance between automation and innovation. Participants suggested that chatbots should enhance intelligence and decision-making. AI communication must be transparent, trustworthy, and fair. Finally, ongoing teaching and learning emphasized formal education and professional advancement. Participants remarked that marketing and business training programs seldom teach chatbot or AI skills, leaving them unprepared for digital disruption.

The six themes demonstrate that chatbot marketing lacks strategic, analytical, ethical, and educational skills. These findings demonstrate that chatbot marketing requires expertise in technology, creative communication, data analysis, and professional development. This study utilises the Chatbot Marketer Model to highlight how these themes together exhibit the skills required for chatbot consumer contact and digital marketing transformation.

5. FINDINGS

This study found that marketing professionals lack multidimensional capabilities in building, implementing, and maintaining chatbots for customer engagement. Six key themes emerged from 21 qualitative interviews with marketing, digital, and communications specialists, highlighting the essential skills required to effectively integrate chatbots into modern marketing strategies. The proposed chatbot marketer model centres on technological proficiency, conversation design skills, strategic integration, analytical and critical thinking, human-AI collaboration, and training and continual learning. These topics encompass the technical knowledge, skills, and behavioural attributes required to bridge the chatbot marketing capacity gap and enhance customer engagement in AI-driven environments.

5.1 Technical Capability

Technology was the most crucial key capability for chatbot marketing. Participants reported that marketers generally lack technical knowledge of chatbot platforms, APIs, and AI tools. Chatbots are frequently utilised in customer support, but most marketers use technical teams or third-party vendors to configure, integrate, and maintain them. Many participants believe they only have a high-level understanding of natural language processing (NLP), automation, and chatbot analytics, which limits their ability to design adaptive campaigns or resolve system issues.

5.2 Storytelling

Dialogue Design Skills, the second theme, emphasises creativity and communication to make chatbot encounters enjoyable. Chatbots can answer basic queries, but their functionality, empathy, and purpose often fail to meet clients' needs. Non-automatable marketing tasks include creating interactive stories that align with brand identity and emotional tone. The right content strategy requires creativity, data-driven insights, and a deep

understanding of consumer psychology, audience segmentation, and the content flow.

5.3 Strategy Integration

Third, strategic integration is the challenge of incorporating chatbots into corporate marketing. Many companies see chatbots as "add-on tools" rather than essential consumer interaction tools. Multi-platform consumer experiences are missed by this fragmented approach. The findings demonstrate that chatbot marketing should strategically connect with the customer journey—from awareness to purchase and after-sales care. Key performance metrics and measurement frameworks for analysing chatbots' influence on brand performance and customer happiness were also stressed.

5.4 Hypotheses Analytical

The fourth area, "Analytical and Analytical Concepts," covers chatbot management, data interpretation, and evidence-based decision-making. Companies collect large volumes of chatbot interaction data, but many marketers lack the analytical abilities to turn it into usable information. Many participants underutilised analytical procedures due to statistical inexperience or a lack of confidence. This absence of analytics restricts chatbot communication and performance improvement.

5.5 Human-Ai Interaction

The fifth theme, "Human-AI Collaboration," explores how marketing creativity and AI are changing. Participants agreed that AI-powered automation is efficient but does not replace judgment, empathy, or ethics. The findings indicate that marketers must learn to effectively engage with AI technologies and manage automation processes while maintaining transparency and fairness in customer interactions. Many interviewees expressed concerns about chatbot ethics, specifically data privacy, algorithmic bias, and customer trust. The growing need for hybrid skill sets, where human control supports machine precision, lays the groundwork for prudent and sustainable AI use in marketing communications.

5.6 Training/Continuing Education

Chatbot technology training is scarce for many marketing professionals, according to the last theme, Training and Continuing Education. Participants said universities rarely teach AI-powered marketing techniques, leaving graduates unprepared for the digital era. Few companies provide marketing

workers with chatbot or AI awareness training. Because entrepreneurs use self-learning or trial-and-error methods, knowledge gaps exist among groups. These subject highlights that higher education and business learning frameworks must integrate digital skills development to close the gap in chatbot marketing skills. Thus, continuous learning drives digital connectivity and worker sustainability.

5.7 Chatbot Marketer Model Development

The study presents the Chatbot Marketer Model, which outlines the critical abilities needed for chatbot-driven marketing by merging these six pillars. Continuous learning and human-AI ethics support technical, creative, analytical, and intellectual competency categories in the model. The model argues that marketers with balanced skills in these categories may develop, execute, and evaluate chatbot systems that improve consumer engagement and organisational performance. Thus, AI expertise, storytelling skills, and continuous skill development are now essential to modern marketing techniques, which expand digital marketing frameworks.

6. CONCLUSIONS

To address the widening skills gap among marketing professionals when engaging with clients using chatbots, our study established a chatbot marketer model. Six themes emerged from 21 semi-structured interviews with marketing professionals and experts: technical capabilities, narrative design skills, strategic integration, analytical and critical thinking, human-AI cooperation, and constant training and learning. These data show that chatbot marketing requires several talents. The research found that chatbot marketing requires a complex blend of technological skills, creative communication, analytical thinking, and ethical understanding to keep pace with the advancements in AI-driven communications.

Chatbots are rapidly incorporated into digital marketing platforms, but many companies lack the qualified ability to build, operate, and manage them effectively. Many marketers depend on technical teams for installation but lack the conceptual and analytical skills to analyse chatbot data or enhance engagement. The study also suggests that chatbot marketing needs emotional intelligence, creativity,

and narrative to develop individualised, customer-like interactions. Chatbot deployment and marketing goals are not always linked; therefore, performance and ROI standards are needed. The Chatbot Marketer Model identifies fundamental chatbot marketing approaches to overcome these difficulties. Marketing success requires a combination of technical, creative, and analytical talents, as well as continual learning and an ethical AI environment, according to the model.

The research has a significant impact on educators, business professionals, and policymakers. The curriculum must include AI and chatbots to teach pupils in an automated industry. Companies can also invest in organised skills and professional development programs that integrate technical training with AI strategy and ethics. Policymakers may help industry-university alliances and digital competence frameworks prepare workers for AI-driven transformation.

6.1. Limitations And Future Research

The research acknowledges its shortcomings, yet it makes significant contributions. Research results cannot be generalised across sectors or locations due to the qualitative character and limited sample size. To evaluate and improve the chatbot marketing model for larger and more diverse audiences, future research should employ quantitative or hybrid methods. As chatbots and AI continue to improve, longitudinal studies may be used to measure these capabilities. Ultimately, this research identifies the fundamental skills required for chatbot marketing, contributing to digital transformation and marketing innovation expertise. It reveals that marketing's future lies in a collaborative environment that leverages AI to enhance creativity, ethics, and strategy.

Ethical concern: The authors maintained the anonymity of all interviewees and addressed any verbal concerns.

Conflicts of Interest: The authors declare no conflict of interest.

Funding: Institute for Advanced Research, United International University, Dhaka, Bangladesh (Research Grant No. IAR-2026-PUB-016).

Web Appendix A. List of Interviewees Job Acknowledgement.

Interview No	Activity	Place of work	Job Title/Role	Number of Employees	Country
1	Reputation management, media, student promotion, and staff news.	University	Marketing Manager.	340	Curtin University Malaysia

2	Environmental Initiatives Toyota, Innovative Technologies, Toyota	Private sector	Marketing Manager of Toyota Japan	367000	Japan
3	The activities are planting and cultivating various crops such as wheat, barley, rice, cotton, sugarcane, fruits, vegetables, and oilseeds.	Private sector	Marketing manager.	6000	Australia
4	Walmart is a retailer that sells various goods like groceries at low price.	Shopping centre	Manager	1.6 million	Walmart USA
5	We provide smartphones for all target markets	Industry	Marketing manager	5000	China
6	Advertising and Promotion	Private sector	Digital Marketing Manager.	17000	Germany
7	Tour Planning and Design.	Agency	Marketing Manager	10000	Switzerland
8	My organization produces timeless footwear and leather bags.	Private sector	Marketing and sales	200 employees	Southeast Asia
9	Container shipping management for its customers	Private sector	Marketing Manager	14,248	Singapore
10	Sells frozen goods such as lamb meat, beef, fish, shrimp, canned fish and frozen vegetables.	Industry	Marketing Officer	100	Finland
11	Ship building	Agency	Scaffolding	15000	Portugal
12	Canadian Natural is one of the largest independent crude oil and natural gas.	Private sector	Operation Manager	9,709	Western Canadian
13	Creating microchips	Industry	Operation manager	73,090	Taiwan
14	We are known as construction, ship building, display technology, semiconductor.	Electronics company	Project Manager	300,000 to 400,000	South Korea
15	Sports materials	Private sector	Marketing Executive	23	Denmark
16	Singapore Airlines Cargo provides airfreight services.	Private sector	Marketing Manager	378	Singapore
17	Vina milks mainly produce products which are derived from milk.	Food and beverage company	Marketing Sales Officer	9,506	India
18	Primarily focuses on providing strategy and consultancy for media, social media, events, design and building, branding, creative and design.	Private sector	Creative director	50	England
19	Sales roles and responsibilities encompass on business and operation.	Private sector	Sales and Marketing Officer	4,000	Brunei
20	Lufthansa Group, one of the largest airline groups in Europe.	Private sector	Corporate Communications & Public Affairs	5,659	Austria
21	Digital marketing, creative design, web development	Digitech company	Marketing and communications	70 +	Colombo, Sri Lanka

Web Appendix B Interview question

Opening questions

Could you please describe the activities and functions undertaken by your organisation?

What is your designated position or responsibility within the company or organization?

What is the total number of employees?

What is the geographic region of the company or service area?

Introduction of Chatbot marketing

What is the current state of your Chatbots marketing efforts?

Which chatbot marketing tactics does your firm employ?

What additional marketing methods does the firm employ to engage with its consumer base?

What are the available options, such as e-mail,

telephone, or letter, for marketing purposes?

Do you perceive this as a financially efficient method for promoting your business?

Can it be considered successful? If yes, what is the basis for your knowledge?

Do you internally manage your Chatbots marketing operations, outsource these responsibilities to a third-party firm, or combine both approaches?

What are your organisation's primary objectives concerning chatbot marketing?

What is the outlook for the upcoming twelve-month period?

What is the projected timeframe for the upcoming years?

What software and hardware types are utilised to develop your Chatbots marketing materials?

Capabilities, skills and gaps

What are the primary competencies and skills your present personnel possess in chatbot marketing?

What strategies do you intend to employ to enhance these capabilities?

What talents are currently lacking inside your organisation?

What are the identified skill deficiencies that require attention in the foreseeable future?

Does your organisation engage external agencies

to address skills deficiencies within its workforce?

If so, would you prefer to cultivate these talents internally, or would you like to continue relying on an agency for this purpose?

Are there any particular categories of competencies you would?

Are there any additional competencies you desire to cultivate in chatbot marketing?

Are there any more remarks or observations to be made?

REFERENCE

- Ahmad Tajuddin, S. N. A., Bahari, K. A., Al Majdhoub, F. M., Balraj Baboo, S., & Samson, H. (2022). The expectations of employability skills in the Fourth Industrial Revolution of the communication and media industry in Malaysia. *Education+ Training*, 64(5), 662-680.
- Ali, O., Murray, P. A., Momin, M., Dwivedi, Y. K., & Malik, T. (2024). The effects of artificial intelligence applications in educational settings: Challenges and strategies. *Technological Forecasting and Social Change*, 199, 123076.
- Allil, K. (2024). Integrating AI-driven marketing analytics techniques into the classroom: pedagogical strategies for enhancing student engagement and future business success. *Journal of Marketing Analytics*, 1-27.
- Amankwah-Amoah, J., Abdalla, S., Mogaji, E., Elbanna, A., & Dwivedi, Y. K. (2024). The impending disruption of creative industries by generative AI: Opportunities, challenges, and research agenda. In (pp. 102759): Elsevier.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.
- Chiu, T. K. (2024). Future research recommendations for transforming higher education with generative AI. *Computers and Education: Artificial Intelligence*, 6, 100197.
- Elbanna, S., & Armstrong, L. (2024). Exploring the integration of ChatGPT in education: adapting for the future. *Management & Sustainability: An Arab Review*, 3(1), 16-29.
- George, B., & Wooden, O. (2023). Managing the strategic transformation of higher education through artificial intelligence. *Administrative Sciences*, 13(9), 196.
- Huang, M.-H., & Rust, R. T. (2021). A strategic framework for artificial intelligence in marketing. *Journal of the Academy of Marketing Science*, 49, 30-50.
- Hussain, K., Khan, M. L., & Malik, A. (2024). Exploring audience engagement with ChatGPT-related content on YouTube: Implications for content creators and AI tool developers. *Digital Business*, 4(1), 100071.
- Ilieva, G., Yankova, T., Klisarova-Belcheva, S., Dimitrov, A., Bratkov, M., & Angelov, D. (2023). Effects of generative chatbots in higher education. *Information*, 14(9), 492.
- Kunz, W. H., & Wirtz, J. (2024). Corporate digital responsibility (CDR) in the age of AI: implications for interactive marketing. *Journal of Research in Interactive Marketing*, 18(1), 31-37.
- Levantino, F. P. (2023). Generative and AI-powered oracles: "What will they say about you?". *Computer Law & Security Review*, 51, 105898.
- Lobo, R., Crawford, G., Hallett, J., Laing, S., Mak, D. B., Jancey, J., . . . Sorenson, A. (2018). A research and evaluation capacity building model in Western Australia. *Health Promotion International*, 33(3), 468-478.
- Marino-Romero, J. A., Palos-Sánchez, P. R., & Velicia-Martín, F. (2024). Evolution of digital transformation in SMEs management through a bibliometric analysis. *Technological Forecasting and Social Change*, 199, 123014.
- Miraz, M. H., Annamalah, S., & Sham, R. (2025). Integrating PLS-SEM and NVivo in Mixed-Methods Educational Research: A Comprehensive Evaluation of Quantitative and Qualitative Analytical Tools. *Educational Process: International Journal*, 19. Retrieved from <https://doi.org/10.22521/edupij.2025.19.531>
- Miraz, M. H., Sham, R., & Annamalah, S. (2025). Advancing mixed-methods research through PLS-SEM and NVivo: a methodological integration in AI literacy studies. *Quality & Quantity*, 1-23.
- Mogavi, R. H., Deng, C., Kim, J. J., Zhou, P., Kwon, Y. D., Metwally, A. H. S., . . . Gujar, S. (2024). ChatGPT in

- education: A blessing or a curse? A qualitative study exploring early adopters' utilization and perceptions. *Computers in Human Behavior: Artificial Humans*, 2(1), 100027.
- Petrescu, M., & Krishen, A. S. (2021). Focusing on the quality and performance implications of marketing analytics. *Journal of Marketing Analytics*, 9(3), 155-156.
- Proença, M., & Martins, T. S. (2023). The role of absorptive capacity in the use of digital marketing analytics for effective marketing decisions. *Journal of Marketing Analytics*, 1-14.
- Rachman, A., Ausat, A. M. A., & Rijal, S. (2024). Humanizing Digital Marketing: The Role of ChatGPT in Human Resource Management Training Programs. *Journal of Contemporary Administration and Management (ADMAN)*, 2(1), 356-362.
- Radebe, S. S., Verkijika, S. F., & Neneh, B. N. (2024). Social media use and performance of small businesses: a customer-centric perspective. *Baltic Journal of Management*, 19(1), 69-84.
- Rakowska, A., & de Juana-Espinosa, S. (2021). Ready for the future? Employability skills and competencies in the twenty-first century: The view of international experts. *Human Systems Management*, 40(5), 669-684.
- Rather, R. A. (2024). AI-powered ChatGPT in the hospitality and tourism industry: benefits, challenges, theoretical framework, propositions and future research directions. *Tourism Recreation Research*, 1-11.
- Schinke, R., Wylleman, P., Henriksen, K., Si, G., Wagstaff, C. R., Zhang, L., . . . Li, Y. (2024). International Society of Sport Psychology position stand: scientist practitioners. *International Journal of Sport and Exercise Psychology*, 22(1), 1-23.
- Sitopu, J. W., Khairani, M., Roza, M., Judijanto, L., & Aslan, A. (2024). The Importance Of Integrating Mathematical Literacy In The Primary Education Curriculum: A Literature Review. *International Journal of Teaching and Learning*, 2(1), 121-134.
- Tafesse, W., & Wood, B. (2024). Hey ChatGPT: an examination of ChatGPT prompts in marketing. *Journal of Marketing Analytics*, 1-16.
- Taha Kandil, T. (2025). Artificial intelligence (AI) and alleviating supply chain bullwhip effects: social network analysis-based review. *Journal of Global Operations and Strategic Sourcing*, 18(1), 5-35.
- Wach, K., Duong, C. D., Ejdy, J., Kazlauskaitė, R., Korzynski, P., Mazurek, G., . . . Ziemba, E. (2023). The dark side of generative artificial intelligence: A critical analysis of controversies and risks of ChatGPT. *Entrepreneurial Business and Economics Review*, 11(2), 7-30.