

Utilizing Artificial Intelligence in Marketing Practices

*- a study covering the practical implementations of generative
artificial intelligence in everyday marketing tasks*



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Title page

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Abstract

Keywords: Generative artificial intelligence marketing, artificial intelligence use in marketing, generative artificial intelligence in general.

In the following research paper, the author examines to what extent the emerging technology of generative artificial intelligence has had an impact on the standard marketer's everyday work tasks being performed in digital marketing agencies. The study highlights the practical use, benefits, and limitations experienced by marketers when utilizing generative AI systems such as Chat GPT, Mid Journey, and DALL-E to assist them in marketing research, content production, and client interactions. In the paper, four research questions are answered, covering what characterizes generative AI (RQ1), how marketers currently utilize generative AI (RQ2), how marketing agencies have implemented generative AI (RQ3), and lastly to what extent that generative AI has changed work practices for marketers.

Findings in RQ1 acquired through a conducted literature review by the author, show that generative AI is a form of AI with the added ability to be able to generate novel content such as various forms of text and imagery. Commonly used generative AI systems, are shown to be Chat GPT for text production and knowledge sharing, and Mid Journey, and DALL-E for the generating of imagery. The enlisted generative AI systems have been specifically trained to generate content in direct correspondence with the user-specific descriptions, also known as 'instructions' or 'prompts' being typed in the systems chat function.

Examinations of RQ2 take basis in a set of inquiries, and a set of semi-structured interviews investigating the implementation of generative AI systems by three marketers. Based on literature and thematic analysis findings, it is concluded that the participants had adopted features of generative AI systems when having to perform various forms of marketing research, produce novel text across different marketing channels, and when interacting with clients. Through thematical analysis, it is concluded that Chat GPT allowed the participants to gain business insights in relation to clients, consumers, and competitors. The participants would similarly utilize Chat GPT to produce parts of texts when creating content across different marketing channels. In general, the participants would use Chat GPT to write, produce structures, and re-formulate aspects of texts when writing articles, blog-posts, social media posts, newsletters for both their own agency and for the clients of their agency.



Investigations from RQ3 show that generative AI systems were viewed as business-critical by most of the participants, emphasizing the need for marketing agencies to educate their employees on the new technology. Based on thematic analysis results, it is concluded marketing agencies would utilize workshops, lectures, and team-working tools to ensure the incorporation of generative AI systems within their agency. Findings show that while the technology was expected by participants to be business-critical, it was not expected at all to be at an extent that would threaten the replacement of human marketeering employees.

Findings from RQ4 take a basis in inquiry observations and thematic analysis, concluding significant benefits of generative artificial intelligence usage by marketers. The study concludes that proper utilization of generative artificial intelligence systems allowed participants to easier initiate more complex work processes, save time in their work tasks, gain increased marketing insights, and save cognitive energy during research and writing processes. However, it is also concluded in the study that the generative artificial intelligence systems still had many limitations in the average marketeering work, re-enforcing the continuous necessity for having human marketers at an agency. Findings from thematic analysis show, that no marketing tasks were completely automated by generative artificial intelligence, and that the quality of generated imagery did not match the participant's expectancies. Similarly, the need for fact-checking and double-checking the artificially generated content was described as of high importance by the participants.

Lastly, a discussion of the project's validity, reliability, and contribution to the general research field is provided. Here, the author describes the implications of having a short project time frame, a small participant sampling size, abroad project scope, and exclusively utilizing qualitative-based research methods. Through reflection on results, it is the author's strong belief that this study will inspire other researchers to investigate further into the area of generative artificial intelligence in marketing. While the results of the participants' experiences are not externally transferable, the author believes that the benefits of time-saving, enhancing efficacy, and saving cognitive brain-power in general marketing practices are for every marketer performing similar tasks.



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1.0 Introduction

Over the last decade, the use of artificial intelligence (AI) by companies in business contexts has become increasingly popular to employ for innovation, processing of large amounts of data, content production, and in areas where a competitive edge can be gained (Jain & Aggarwall, 2020). Artificial intelligence has especially become increasingly popular in the marketing industry, where companies utilize the technology to personalize, predict and process consumer data and design algorithms that tailor content to the user (Jain & Aggarwall). One area of AI that has recently provided marketing agencies, and marketers with significant opportunities to save resources, has been the emerging area of generative AI. Generative AI is a form of AI that allows the user to generate novel content such as various genres of text and imagery at an extremely fast pace compared to the time it would take to do manually (Cao et al., 2023). This generative AI could in theory be used by marketing agencies to create content at an instant rate for their clients, allowing the agency to save large amounts time and resources, while possibly enhancing the quality of their work (examined in chapter 4.0; thematic analysis).

But what characterizes the technology of generative AI? How is it currently used in practice by marketers and what impact does it have on marketing agencies as a whole? To what extent can generative AI help the marketer in their everyday work practices – and to what extent is the technology limited? The following project investigates the areas of generative AI in marketing and examines the potential practical opportunities, obstacles, benefits, and limitations of the technology when utilized by marketers for standard marketing tasks in 2023.

1.1 Problem formulation:

What is Generative Artificial Intelligence Marketing (AIM) and to which extent can it be utilized by marketers to assist them in the completion of general marketing tasks?



1.2 Research questions:

RQ1: What characterizes Generative Artificial Intelligence, and how does it work?

RQ2: How do marketers utilize Generative Artificial Intelligence in their main marketing practices?

RQ3: To what extent has Generative Artificial Intelligence been incorporated by marketing organizations?

RQ4: To which extent can Generative Artificial Intelligence be used to assist the marketer in their everyday work tasks?

1.3 Correlation between research questions

The main purpose of the following project is to uncover knowledge in the specific areas of generative AI and its implications for marketers and marketing agencies. While recognizing the enormous potential and technological complexity of general AI models in general, the following project will mostly describe features of generative AI from a practical point-of-view. I as a researcher believe it is important to provide the reader with a basic understanding of AI and generative AI, but I also believe that there are far more qualified research papers that have already covered the technically complex areas of AI better than what I can with my credentials. Furthermore, while recognizing that generative AI can be used to generate content in many different situations, contexts, and across different industries, this paper exclusively focuses on the usage for practical marketing tasks. A further discussion of to what extent the project findings are transferrable will be further described in in chapter 6.0 of the project. I as a researcher am highly aware the marketing industry is highly complex, and that the area of generative AI is widely complex as well. However, my belief as a researcher is that the established project scope in this section and with the RQs (see section 1.2) has been narrowed to a sufficient extent for this paper to provide knowledge within these areas.



1.4 Research scope and limitations

The main purpose of the following project is to uncover knowledge in the specific areas of generative AI and its implications on the marketer and marketing agencies. While recognizing the enormous potential and technological complexity of general AI models in general, the following will project will mostly describe features of generative AI from a practical point-of-view. I as a researcher believe it is important to provide the reader with a basic understanding of AI and generative AI, but I also believe that there are far more qualified research papers that have already covered the technically complex areas of AI better than what I can with my credentials. Furthermore, while recognizing that generative AI can be used to generate content in many different situations, contexts, and across different industries, this paper exclusively focuses on the usage for practical marketing tasks. A further discussion of to what extent the project findings are transferrable can be found in section 6.1; reflections on validity. While the broad industry of marketing and the complexity of the term generative AI still forms a broad research scope, it is my professional belief that the established RQs (see section 1.2) has been narrowed to a sufficient extent for this paper to provide meaningful knowledge.

1.5 Abbreviations

In the following project, I will be using complex abbreviations, that will have a slightly subjective meaning in the respective context that they are being used. Therefore, the following abbreviations are provided for a better understanding when reading the following research paper. The terms listed for abbreviations below should not be viewed as universally defined terms in general research.

- **AI** – Artificial intelligence
- **AIM** – Artificial intelligence marketing
- **General marketing tasks** – Any task that can be categorized as a typical everyday task being performed at a marketing agency.
- **Generative AI** – Generative artificial intelligence
- **Generative AI systems** – Generative AI software such as Chat GPT and Mid Journey.
- **Prompts** – Instructions by the user to the system when generating content.



2.0 Literature review

According to Bryman a research project should be initiated with a literature review that ensures that the research team is aware of the existing findings in the area of the proposed research questions (Bryman, 2012, p. 98). A literature review is defined by Cronin et al. as: “[...] an objective, thorough summary and critical analysis of the relevant available research and non-research literature on the topic being studied” (Cronin et al., 2008, p. 38). When conducting a literature review the research team should gather information from multiple sources and produce an unbiased summary of the body of literature findings (Cronin et al., 2008, p. 38). The literature review is also where the research team establishes credibility by presenting the work of others in the field. Through this process, the research team also becomes aware of the significance of their own research scope and how it contributes to the broader research (Bryman, 2012, p. 98).

While there exist multiple approaches for conducting a literature review Cronin et al. argue that a literature review generally follows the five steps of 1) Selecting a review topic, 2) searching for literature, 3) Gathering, reading, and analyzing the literature, 4) writing the review and 5) referencing (Cronin et al., 2008, p. 39). In the following project, I will adapt the proposed five steps approach by Cronin et al. along with the PQRS-method which will be elaborated throughout.

2.1 Literature search

When approaching step one of Cronin et al. five recommended steps for undertaking a literature review I first considered relevant topics and concepts in relation to the project scope (see section 1.4). This process led me to select a total of two concepts to uncover 1) artificial intelligence (AI) in general, 2) the utilization of AI and generative AI in marketing. The purpose of searching for literature within the two concepts is to uncover general knowledge about AI and generative AI, and then specifying the use of AI and generative AI in the context of marketing. Having decided on the two



concepts mentioned above reflecting the project scope (see section 1.4) I then proceeded to the second step of Cronin et al. recommendations: *Searching for literature*.

When searching for literature Cronin et al. suggest that the research team should form a search strategy that includes producing a list of keywords and then using a combination of these to search for literature within multiple electronic databases (Cronin et al., 2008, p. 40). When establishing a list of keywords concerning the two chosen review topics, Cronin et al. state that: “It is a good idea to consider alternative keywords with similar meanings that might elicit further information” (Cronin et al., 2008, p. 40). In alignment with Cronin et al. guidelines for establishing keywords to search for literature, I came up with the following list of keywords.

Artificial intelligence (AI) in general:	Utilizing AI in marketing:
Artificial intelligence in general	Artificial intelligence marketing
Artificial intelligence definition	Artificial intelligence in the marketing industry
Generative artificial intelligence	Artificial intelligence in marketing agencies
Generative artificial intelligence systems	Generative artificial intelligence marketing
Generative artificial intelligence usage	Generative artificial intelligence in marketing

Figure 1: An overview of the primary keywords used to perform a literature search in the project on the three selected review areas.

The keyword list above was used in multiple search engines such as Google Scholar, Aalborg University Library (AUB), and Academic Search Premier. However, it is important to note that part of the literature review concerning included aspects of previously acquired literature through work and



my research knowledge acquired at Aalborg University. Cronin et al. state that: “Existing literature reviews and systematic reviews can also be important sources of data” (Cronin et al., 2008, p. 40). Having conducted an extensive literature search I then proceeded to step three of Cronin et al. steps to undertaking a literature review: Gathering, reading, and analyzing the literature.

2.2 Literature selection

Once an extensive literature search has been completed the research team can initiate a strategy for selecting and sorting the literature sources (Cronin et al., 2008, p. 40). A common approach is the PQRS-system where literature is previewed, questioned, read, and summarized. The system keeps the researcher “[...] focused and consistent but ultimately facilitates easy identification and retrieval of material particularly if a large number of publications are being reviewed” (Cronin et al., 2008, p. 41). I as a researcher find the PQRS-system especially useful for literature selection in the following project as I have conducted a large body of existing literature that should be questioned based on its relevance to the project scope (see section 1.4). Having completed the preview-phase where I read the abstract of each paper in the literature search phase (see section 2.1) I then proceeded directly to the question-stage. “In the question stage, questions are asked of each publication.” (Cronin et al., 2008, p. 41). Questions may come in the form of comments, notes, or reflections regarding the relevance of the paper for the project scope along with standardized quality criteria for each article (Cronin et al., 2008, p. 41-42).

When questioning a large amount of acquired literature I set up the following three quality criteria: 1) The literature should ideally be peer-reviewed and/or published in a recognized research portal to ensure an increased research validity, 2) the literature should ideally be as recent as possible due to the rapid development of generative AI and 3) the findings of the paper should relate to one or preferably all of the areas of project research scope (see section 1.4). Through an iterative process of questioning the relevance of the body of literature, I proceeded to the last two phases of the PQRS-system: the *reading-stage* that ultimately led me to the writing of the following review in the *summarization-stage*. Cronin et al. also refer to the summarization stage as step four in their recommendations for undertaking a literature review: *Writing the review* (Cronin et al., 2008, p. 41-42).



2.3 Reviewing the Literature

The following sections include the summarization of the acquired literature within the two areas of 1) artificial intelligence in general, and 2) artificial intelligence and generative AI marketing. While I strongly believe the following content will provide the reader with fundamental knowledge on these research topics, it is important to note that exist a lot more literature on generative than what is being covered here. Furthermore, new research on AI and AI marketing is constantly produced so certain limitations described in literature as of 2023 might not apply in a few years when reading this paper.

2.4 Artificial intelligence (AI) in general

The following section of the literature review provides the reader with central knowledge about what characterizes AI in general, the characteristics of generative AI, which types of generative AI tools exist, and how they work. Following the project scope (see section 1.4) the intent of the following literature section is not to provide the reader with an extensive theoretical explanation of how AI modeling works through complex machine learning structures and programming. Instead, this section intends to provide the reader with a fundamental understanding of AI, generative AI, and the practical applications of use that generative AI software have made possible for humans.

2.4.1 AI – A brief history and definition

The field of AI can be traced back to when the researcher Alan Turing in the paper *Computing Machinery and Intelligence* (1950) first questioned what conditions that should be in place for a machine to be considered intelligent (Mccarthy, 2007, p. 4). A few years later the word 'AI' was then used for the first time by Stanford University professor John Mccarthy in 1956 when he described AI as: "The science and engineering of making intelligent machines" (Stanford University, 2023). The term artificial intelligence was then elaborated over the decades by many different researchers,



but still without a decisive universal agreement on the limitations of the term (Lucci & Kopec, 2016; Wang, 2008, p. 362; Mccarthy, 2007).

As of 2023 artificial Intelligence is defined in the Oxford English Dictionary as: “The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages” (Oxford, 2023). While there exist many other formal definitions of AI, the Oxford definition of AI is the one I will be referring to throughout the following project. This is due to the definition being the most present, and in my professional opinion, a very complete definition that suitably covers all the most vital aspects of AI described in this project.

2.4.2 Recognizing features of Artificial Intelligence

Lucci and Kopec in their book *Artificial Intelligence in the 21st century: A living introduction* (2016) claim that there is no singular universally agreed view of exactly what AI is (Lucci & Kopec, 2016, p. 4). The authors state that AI can mean different things to different people, based on their ability to recognize the concept of ‘intelligence’ in machines (Lucci & Kopec, 2016). Some people choose to recognize AI as any form of intelligence shown by nonliving systems, while others choose to only recognize the AI systems that can mimic part of human intelligence (Lucci & Kopec, 2016). The authors suggest that the concept of AI comprises a mixture of people, ideas, methods, machines, and outcomes. It is the people with ideas that apply methods to represent those ideas through the utilization of algorithms, heuristics, procedures, and system programming which in the end can lead to the creation of an artificially intelligent machine system outcome (Lucci & Kopec, 2016, p. 4).

In another research paper, *What do you mean by “AI”?* (2008) the author outlined five typical views of describing AI based on: Structure, behavior, capability, function, and principle (Wang, 2008, p. 2). By *structure* it is suggested that machine intelligence is dependent on a machine's ability to be modelly structured similarly to the human brain (Wang, 2008, p. 2-3). *Behavior* refers to the idea of recognizing a machine's intelligence based on its ability to replicate human behavior and



the human mind (Wang, 2008, p. 3). AI can also be viewed based on its *capability* to solve hard problems, similar to the way that human intelligence is being evaluated (Wang, 2008, p. 4). Another view by AI researchers is to recognize AI by its *function*, meaning as an agent with the intelligent ability of mapping inputs and provide output solutions for a given purpose (Wang, 2008, p. 5). Lastly, there is the *principle* way of viewing AI, where the intelligence of a machine is viewed both in terms of its ability to fulfill a function and its ability to replicate the human mind and to process the best solutions with the available knowledge (Wang, 2008, p. 5-6).

The author states that: “The above five definitions of AI are all legitimate research goals, which are different from each other” (Wang, 2008, p. 2008). In the following project, I will primarily examine the function capability of AI, and to what extent the technology can provide useful output solutions for marketers when doing their marketing tasks. This view is especially important for the evaluation of the effectiveness of AI concerning marketing which is further discussed in chapter 5.0.

2.4.3 Defining Generative AI

The term generative AI can be defined as an “[...] AI system that uses existing media to create new, plausible media” (Morris et al., 2023). According to statements from various research papers, it is suggested that the new emerging technology of generative AI is among one of the most significant advances in machine learning in recent years (Morris et al., 2023; Muller et al., 2022; Mariani et al., 2021; Cao et al., 2023). In the paper *Generative AI and HCI* (2022) the authors describe that: “Unlike AI systems that produce decisions or descriptions, generative AI systems can produce new and creative content that can include images, texts, music, video, and other forms of design” (Muller et al., 2022, p. 1). Similarly, it is described in the research paper *The Design Space of Generative AI Models* (2023) that generative AI has the ability to produce novel text, imagery, and other forms of media that are indistinguishable in quality from human-created content (Morris et al., 2023, p. 1). In another paper by Cao et al. the authors concluded that artificially intelligent generated content has emerged to a level where it can enhance the efficiency and accessibility of the general content production process (Cao et al., 2023). While there exist many different forms of generative AI



software, the authors state that generative AI software such as Chat GPT, Dall-E-2, and Codex has become widely popular in society as widely accessible generative AI tools (Cao et al., 2023, p. 1).

2.4.3.1 Chat GPT

According to Cao et al. (2023) ChatGPT can be defined as: “[...] a language model developed by OpenAI for building conversational AI systems which can efficiently understand and respond to human language inputs in a meaningful way (Cao et al., 2023, p. 2). The owning company OpenAI, states on its website that the software of ChatGPT was optimized for dialogue as a multi-purpose language model to produce text (OpenAI, 2023). It is stated that the models forming ChatGPT were specifically trained “[...] on vast amounts of data from the internet written by humans, including conversations, so the responses it provides may sound human-like” (OpenAI, 2023; ChatGPT). When entering the free function of ChatGPT the viewer will be met with a standard chat function, and with the following examples of use, capabilities, and limitations of the Chat GPT software (OpenAI, 2023; ChatGPT).

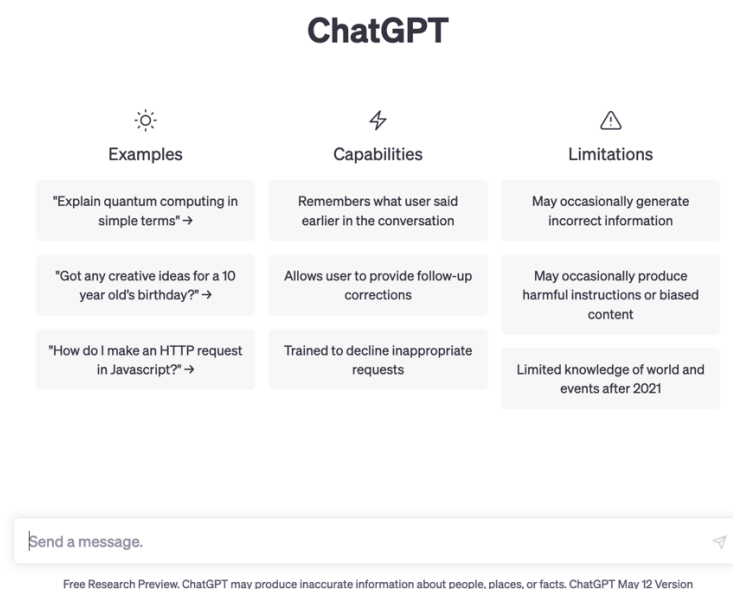


Figure 2: Showing an overview of the user interface in Chat GPT and the ‘examples’, ‘capabilities’, and ‘limitations’ that the company OpenAI describes the software by.



In the paper *Chatting about ChatGPT: How may AI and GPT impact academia and libraries* (2023), the authors describe that ChatGPT is a sophisticated chatbot that can answer anything from simple questions to completing more complex tasks for the user (Lund & Wang, 2023, p. 3). Similar statements were made in other research papers where the authors found that ChatGPT could be used in a variety of contexts such as assisting in answering public health questions (Biswas, 2023), to solving programming bugs (Surameery & Shakor, 2023) to being applied by marketers (see section 4.2). The features of Chat GPT will be subject for analysis in various way throughout the mathematical analysis of the project in section 4.2.1 and 4.2.2.

2.4.3.2 DALL-E 2

According to Cao et al. (2023) DALL-E-2 is: “[...] another state-of-the-art GAI model also developed by OpenAI, which is capable of creating unique and high-quality images from textual description in a few minutes” (Cao et al., 2023, p. 2). On OpenAI’s website, they refer to DALL-E-2 as an AI system that creates realistic images, illustrations, and art based on user-inserted instructions (OpenAI, 2023; DALL-E-2). When entering the DALL-E-2 webpage the user will be met with a chat bar, and a section of artificial intelligently generated images (OpenAI, 2023; DALL-E-2). Through the user's descriptive text inputs the DALL-E-2 system can generate original synthetic imagery or edit existing imagery uploaded by the user (Marcus, Davis & Garrison, 2022, p. 1).



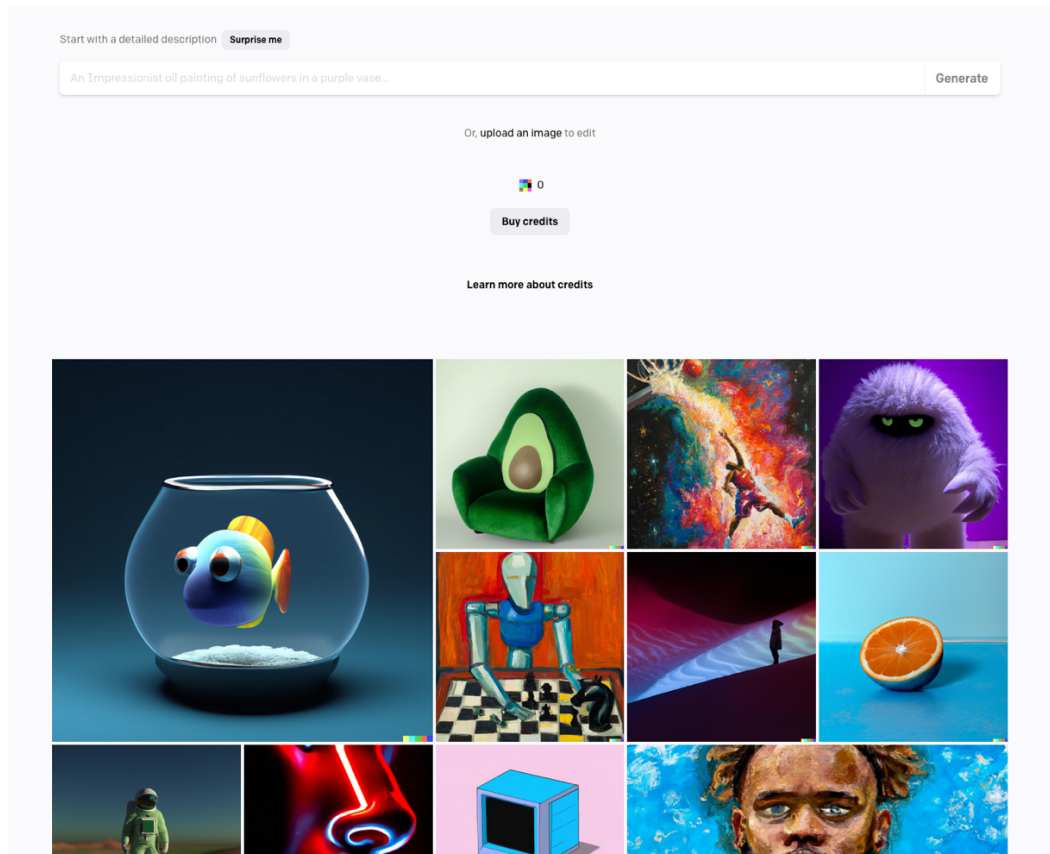


Figure 3: Showing an overview of the user interface in DALL-E and the chat-function, and examples of artificially generated images. The following overview is of the un-paid version of the software, as no credits were bought.

In the paper *A very preliminary analysis of DALL-E-2* the researchers performed 14 highly complex requests to the DALL-E-2 system to examine the extent of its capabilities (Marcus, Davis & Garrison). Based on the evaluation of the system outputs the authors described the DALL-E-2 software as particularly useful for generating candidate imagery that a graphical artist could choose from. However, the authors also concluded that a much higher standard must be applied before applying artificial intelligently generated imagery in safety-critical applications. The software would sometimes lack in quality when illustrating humans and human faces (Marcus, Davis & Garrison, 2022). A similar view on DALL-E-2 is described in the research paper *The Ethical Implications of DALL-E: Opportunities and Challenges* (2023). In the paper, the author described the software as having exciting opportunities for creativity and innovation but also pointed out the ethical implications



such as bias, discrimination, and other unintended consequences related to generative AI imagery software (Zhou & Nabus, 2023, p. 17).

2.4.3.3 Codex

Codex is being described by the owning company of OpenAI, as an AI system that translates natural language into code (OpenAI, 2023; Codex). The generative AI software allows the user to generate complex codes from scratch into multiple coding languages based on the user's natural language text inputs (Cao et al., 2023). When entering the Codex AI the viewer will be presented with an introductory page explaining instructions and possibilities of the software (OpenAI, 2023; Codex).

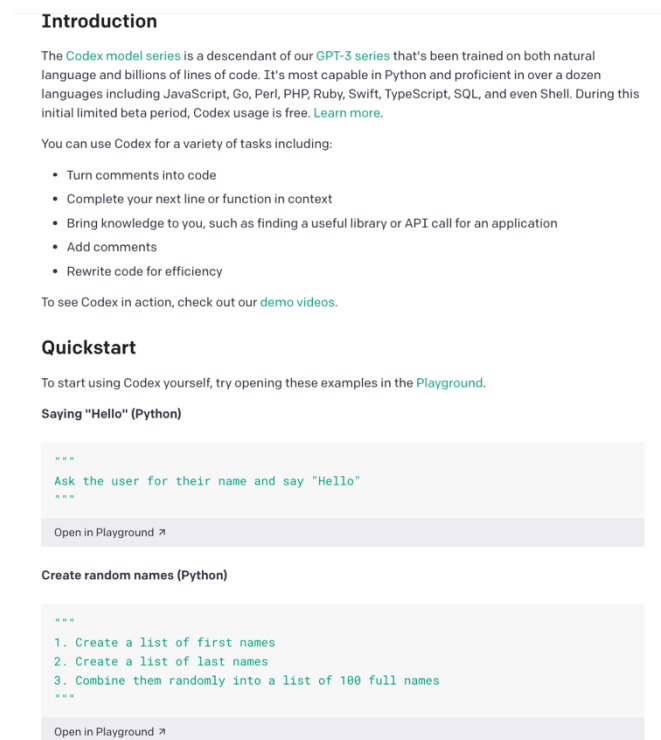


Figure 4: Showing an overview of the user interface in Codex and the examples of usage provided by OpenAI. If the user clicks ‘Open in Playground’ they user will have the options to write instructions that can be turned into codes.



According to the introductory page provided by OpenAI, Codex can be used for turning comments into codes, completing coding lines and functions, rewriting code, and providing general coding knowledge. In the paper *Automated Repair of Programs from Large Language Models* (2023) the authors conclude that Codex has the capability to produce codes for simple tasks, but that the success rate generally decreases as the complexity of the coding tasks goes up. An issue that the authors suggest may be diminished in the future, as automated AI coding software gets more training (Fan et al., 2023).

2.5 Utilizing artificial intelligence in marketing

The following section of the literature review provides the reader with central knowledge about the utilization of artificial intelligence in the field of marketing. This section introduces the term Artificial Intelligence Marketing (AIM), how AI can be used in marketing practices, along with a general coverage of the benefits, possibilities, and limitations of utilizing AI in the marketing industry as of 2023. The goal of the following section is not to provide the reader with unique knowledge about general marketing as there are far more credential research papers that have done this before (see section 1.4 project scope). Instead, the intent of the following section is to provide the reader with specific knowledge about how the emergence of AI and generative AI has affected the marketing industry, and how generative AI might continue to enforce significant changes in the field of marketing in the future.

2.5.1 Artificial Intelligence Marketing (AIM) – Definition and importance

Over the last couple of years, AI has become a significant and highly popular trend in the marketing industry (Vlacic et al., 2021, p. 1; Jarek & Mazurek, 2019, p. 46; Huang & Rust, 2022, p. 209). The term Artificial Intelligence Marketing (AIM) can be defined as: “[...] the development of artificial agents that, given the information they have about consumers, competitors, and the focal company, suggest and/or take marketing actions to achieve the best marketing outcome (Vlacic et al., 2021, p.2; Overgoor et al., 2019, p. 2). AIM is generally considered an approach for utilizing technology in the form of AI to assist in general marketing tasks involving communication, creation, and



delivery of offerings to clients, partners, customers, and consumers (Jain & Aggarwall, 2020). The definition of AIM proposed by Vlacic et al. (2021) generally leans towards the area capability and function view of determining AI (see section 2.4.2). When adopting this perception of generative AI, the efficiency and intelligence of AI are primarily judged based on its ability to produce intelligent outcomes (see section. This view is also a central aspect of the criteria determining the effectiveness of AI marketers that will be evaluated in the project findings (see chapter 5.0).

In the paper *The Evolving Role of Artificial Intelligence In Marketing A Review and Research Agenda* (2021) the authors systematically reviewed 164 articles related to the adoption, use, and acceptance of AI in the marketing industry. Based on the body of literature the authors stated: “An increasing amount of research on Intelligent Systems/Artificial Intelligence (AI) in marketing has shown that AI is capable of mimicking humans and performing activities in an ‘intelligent’ manner (Vlacic et al., 2021, p. 1). The authors state that AI has become particularly important in strategic marketing, where enormous tech companies such as Google, Spotify, and Under Armor have adopted AI-based platforms to enhance their performance, aspects of their customer interaction, and general market forecasting. Examples of globally successful AI-based systems are Google Assistant, Microsoft Cognitive Services, and Amazon Lex (Vlacic et al., 2021, p. 2; Tractica, 2020). It is estimated that the use of AI in business will grow from a 10 billion dollar industry to a 126 billion dollar industry by 2025 (Vlscic et al., 2021, p. 3). Furthermore, it is estimated in the literature that up to 60% of American companies are expected to have implemented AI into their sales and marketing strategy by 2022 (Vlacic et al., 2021, p. 3).

2.5.2 AI’s contributions to the marketer – A framework

In the paper *Marketing Intelligence and Artificial Intelligence* (2019) the authors conclude that AI has contributed to commercial solutions for companies in five areas: Image recognition, text recognition, decision-making, voice recognition, and autonomous robots and vehicles (Jarek & Mazurek, 2019). The first three areas concerning the handling of image, text, and decision-making are applied extensively in the marketing industry while the latter two of voice recognition and autonomous robots are mostly applied by larger tech companies (Jarek & Mazurek, 2019, p. 3).



In another paper *Transforming Marketing with Artificial Intelligence* (2020) the authors reviewed the whole concept of AI utilization in the marketing industry. The authors concluded that AIM had transformed traditional and automated marketing techniques, and instead enabled that “[...] personalization, speech and image recognitions, chatbots, churn predictions, dynamic pricing and customer insights came into the vision” (Jain & Aggarwall, 2020, p. 3975). The authors furthermore, proposed a concrete framework that stated the benefits of implementing AI for both marketers and customers (Jain & Aggarwall, 2020, p. 3965).



Figure 5: Jain & Aggarwall’s illustration of benefits for marketers and customers when utilizing AI marketing practices. The illustration was provided in the open-access research paper by Jain & Aggarwall (2020) and I do in no way intend to be responsible for creating it.

The diagram above is a framework proposed by the authors, outlining general benefits for marketers when implementing features of AI into their work (Jain & Aggarwall, 2020). The figure illustrated by Jain & Aggarwall enlightens some of the many benefits of AIM that can occur for both marketers and the consumers (Jain & Aggarwall, 2020, p. 3965). The benefits presented by the authors directly inspired aspects of the projects and illustrated the tailored framework of implementing generative AI into the work practices of marketers (see figure 7).



2.5.3 AIM benefits – Big data, machine learning and powerful solutions

In the paper *Artificial Intelligence and Marketing* (2018) the authors conclude that the three main significantly beneficial concepts of applying AI for marketers are: Big data, machine learning, and powerful solutions (Dimitrieska et al., 2018, p. 298).

Big data refer to the concept of the large and diverse amount of quantitative data inputs that companies experience through posts, comments, social networks, digital images and videos, reports, consumer transactions, and other diverse data sources (Dimitrieska et al., 2018, p. 300). The handling of big data can become an issue for companies when encountering the need to act on the volume, variety, and velocity of data (Dimitrieska et al., 2018, p. 300). However, through tailored AI systems the marketer now has an increased ability to aggregate and segment large amounts of data while minimizing the amount of manual work needed. The data would additionally ensure that the marketer has a better understanding of how to deliver the right message, to the right people, via the right marketing platform (Dimitrieska et al., 2018, p. 298). To the best of my knowledge, I as a researcher will argue that similar benefits such as ‘performance and ROI booster’ and ‘minimal manual work’ shown in figure 5 is a direct result of AI’s ability to handle big data for marketers. Suggesting an general agreement of benefits in the literature.

The second concept of *machine learning* is described by the authors as: “[...] an advanced area of artificial intelligence that allows programs to absorb large amounts of data and create predictable algorithms that improve over time” (Dimitrieska et al., 2018, p. 301). The benefits of machine learning for marketers are that AI systems can help them provide customized content to consumers, suggest products based on consumer interactions, and overall enhance the possibilities to provide personalized marketing (Dimitrieska et al., 2018, p. 301). The marketer can utilize machine learning for assisting in predicting consumption trends, tracking consumer purchases, and predicting future consumer behavior (Dimitrieska et al., 2018, p. 298). The authors argue that the main feature of machine learning in marketing practices is its ability to: “[...] obtain experience data by applying algorithms that rely on computer vision, artificial intelligence and data mining” (Dimitrieska et al.,



2018, p. 301). To the best of my knowledge, I as a researcher will argue that similar benefits such as ‘tracking customer’s purchase pattern’ and ‘creation of personalized advertisement’ shown in figure 5 is due to the increased ability of marketers to utilize the machine learning algorithm aspect of AI.

The third concept of *powerful solutions* refers to increased assistance and ability in the process for marketers when encountering the need for decision-making. The authors Dimitrieska et al. (2018) argue that machines today can easily identify concepts and themes across large data sets, interpret emotions and human interactions, and generate adequate responses to consumers based on these data inputs (Dimitrieska et al., 2018, p. 298). It is argued that the concept of powerful solutions is the benefit of tailored AI systems' ability to simplify datasets and minimize unnecessary complex data structures (Dimitrieska et al., 2018, p. 301 Stone et al., 2020). This process results in giving the marketer a more efficient, accurate, and understandable foundation of data to make decisions from (Dimitrieska et al., 2018, p. 301-302). To the best of my knowledge, I as a researcher will argue that similar benefits such as ‘promotion of brand image’ and the maintaining of ‘healthy customer relationship’ shown in figure 5 can be partly due to the marketers' ability to utilize AI in the decision-making process. The concept of utilizing AI as a general research tool to gain marketing insights proved to be a vital topic in the thematic analysis of the project (see chapter 4).



3.0 Methodology

In the following chapter, the research approach, research design, and the underlying research methods used to acquire and analyze knowledge about AI in marketing practices are described. Firstly, the chosen ontological and epistemological views adopted in the project are described in the context of the project's general philosophy of science. Then the project's research design framework is outlined and lastly, a description of the chosen research methods used to collect data is provided. The following section was formed based on knowledge acquired through the third part of the literature review, emphasizing how AIM can be approached from a research perspective.

3.1 Research approach: Pragmatism

When approaching the area of AI use during marketing practices from a research perspective I first considered the three fundamental questions of research: Ontology, epistemology, and methodology. According to Guba & Lincoln (1994) ontology concerns the question of what can be perceived as real and what knowledge can be acquired about the field of inquiry (Guba & Lincoln, 1994, p. 108). Epistemology concerns the question of how fundamental knowledge about the world can be understood and recognized. Methodology concerns the methodological approach to how fundamental knowledge best can be acquired (Guba & Lincoln, 1994, p. 108-109). According to Guba & Lincoln (1994) the choice of methodology should reflect in the researcher's answers to the ontological and epistemological beliefs (Guba & Lincoln, 1994, p. 108).

When reassessing the research scope (see section 1.4) and the emphasis on producing knowledge that can be utilized in the real world by marketing companies I was inspired by views within the *pragmatic paradigm*. Within pragmatism, the researcher is concerned with solving practical problems and producing knowledge that can be applied to enforce change in the world (Goldkuhl, 2012, p. 7; Brinkmann, 2010). During the following investigation of AI use in marketing practices by marketers, I intend to acquire knowledge that can lead to concrete suggestions on how AI can –



and cannot – influence the work practices of marketers. The ontological belief of pragmatism is that knowledge about humans only can be obtained through interactions and engagement with humans in practice (Brinkmann, 2016). Epistemological assumptions of pragmatism are that knowledge much be recognized through practical actions and doing. Therefore, methodological choices within pragmatism should reflect the desire to acquire knowledge practical knowledge of human interactions in the real world (Brinkmann, 2016).

The ontological and epistemological assumptions within pragmatism inspired the following research design and choice of research methods. Meaning that I adopted and utilized the following research methods based on the intent, to produce concrete knowledge that would be applicable for other marketers and marketing agencies to act upon.

3.2 Research design: Utilizing the quasi-experimental research design

A research design can be defined as “[...] a plan for collecting and analyzing evidence that will make it possible for the investigator to answer whatever question he or she has posed.” (Priya, 2021, p. 98). According to Bryman a research design provides the researcher with a structured framework on how to execute research methods and how to analyze the subsequent data (Bryman, 2012, p. 45). When structuring a qualitative research design, one should be aware of how choices will affect the research team's ability to describe a social phenomenon, determine casual correlations within the data, and to what extent the findings can be generalized towards larger groups of individuals than those who are taking part in the study (Bryman, 2012, p. 46).

In the following project, I will adopt the core principles of the Quasi-experimental design. The quasi-experimental research design evaluates an intervention of a variable but does not utilize randomized trials (Bryman, 2012). Due to the limitations in available participants for sampling, I adopted the quasi-experimental research design, and specifically sampled expert participants through professional connections in the area of marketing. The studied intervention variable in the following project is the generative AI technology, and the studied participants are experienced



marketers that has performed average marketing tasks long before the emergence of generative AI technology.

Concerning the sampling strategy of the project, one should be aware of the chosen stake-holders, meaning the people or organization who is affected by the intervention or outcome (Dix et al., 2004; Schmeer, 2000). Throughout this project, I will be using aspects of *convenience sampling* and *purposive sampling* of marketers whose work has been directly influenced by generative AI. Convenience sampling refers to the selection of participants based on accessibility, while purposive sampling refers to the selection of participants based on specific criteria's (Bryman, 2012). In the following project I utilized convenient business-connections through work, but I also tried to select participants with high expertise in the marketing industry. The limitations and reliability of the chosen sampling strategy is further discussed in chapter 6.0.

3.3 Research methods: Contextual Inquiry

When seeking to understand the complexity of the marketer's work practices and how they use AI to assist everyday marketing tasks I decided to adopt the use of the research method of *contextual inquiry*. Contextual inquiry is a qualitative field research method that is useful for conducting data and insights about the needs, issues, and concerns that the examined audience experience when performing tasks in their natural work environment (Holtzblatt & Beyer, 2014). A contextual inquiry is typically performed by the research team with the ulterior goal of minimizing the obstacles and enhancing the work practices of the target audience (Holtzblatt & Beyer, 2014). In the following project, the use of contextual inquiry is applied to get a better understanding of to what extent marketers are affected in their everyday marketing tasks by the emergence of generative AI.

When performing a contextual inquiry, the research team should be aware of the different types of research possibilities and how they might affect the data outcome. Researchers Raven & Flanders (1996) distinguish between two types of contextual inquiry: Work-based interviews, and post-observation inquiry. The work-based interview is where the research team observes and asks the participants questions during the performance of their work tasks to gain an immediate understanding of



their thoughts during their work (Raven & Flanders, 1996). In contrast the *post-observation inquiry*, the research teams observe the participant performing work tasks and wait with asking follow-up questions till afterward to avoid unnatural interruptions throughout (Raven & Flanders, 1996). In the following project, I will employ post-observation inquiry where I watch the marketers throughout an average workday, and ask follow-up questions through a semi-structured interview at the end.

3.4 Semi-structured Interviews with marketing experts

In continuation of the contextual inquiry method, a set of semi-structured interviews was conducted to acquire further information about the marketers and their use of AI during their everyday work practices. According to Bryman et al. (2021) the interview method is useful for acquiring qualitative information about an individual or multiple individuals' thoughts, feelings, and experiences regarding the investigated research topic (Bryman, 2012, p. 466). When choosing to utilize the interview method one should also distinguish between qualitative or quantitative interviewing as well as the structure of the interviewing. Bryman states that qualitative interviewing generally emphasizes open-ended questions with a semi-structured or unstructured approach allowing the interviewees more freedom of expression. On the contrary, the quantitative style of interviewing emphasizes fixed questions with the purpose of maximizing validity and reliability by asking each participant the exact same set of questions (Bryman, 2012, p. 466-467). It is also important to consider the participant, the settings, and the general research context that the interview takes place in (Kvale & Brinkmann, 2008; Lazar et al., 2017).

Based on the aim of understanding how marketers interact and utilize generative AI in their everyday work practices (see project scope 1.4) I decided to adopt the qualitative semi-structured interview approach. Bryman states that the semi-structured interview approach is particularly useful for conducting information about a specific research topic while still allowing for the exploration of other topics that the participant might bring up (Bryman, 2012, p. 468).



In the semi-structured interview, the research team typically constructs an interview guide, with questions that guide the direction of the interview. While the guide is useful for providing an overview of the interview topics to be explored Bryman states that: “Questions may not be asked exactly in the way outlined on the schedule.” (Bryman, 2012, 468). When conducting a semi-structured interview, the interviewer should instead seek to ask follow-up questions based on the specific interviewee’s answers (Bryman, 2012, 468; Lazar et al., 2008). When choosing the semi-structured interview approach as opposed to the unstructured interview, it was due to the need for specificity in relation to answering the research questions. Meaning that I as an interviewer wanted to explore more specific uses of AI than the unstructured interview approach might have steered the interview direction towards. On the contrary, I chose to utilize a qualitative research approach as the contextual inquiry observations would significantly impact the questions that I would ask the participants.

The following interview guide was constructed following Bryman’s general suggestions for structuring an interview guide in the semi-structured interview approach (Bryman, 2012, p. 468-469). Questions were asked to the participants post the contextual inquiry. This helped me better understand their thoughts and actions when having gone through specific work tasks with the assistance of generative AI. The interview guide is listed on the following pages – one specific guide for a marketing CEO and one for the two other general marketing specialists.

3.4.1 Interview guide for the marketing CEO:

- 1. How has the use of generative artificial intelligence (AI) been integrated into your organization so far?
- 2. Which generative AI software are you aware of that is being used by either you or your employees during certain marketing tasks?
- 3. Can you provide specific examples of marketing work tasks where generative AI could help enhance or assist the process?



- 4. How do you evaluate the benefits of generative AI for your marketing bureau?
- 5. How do you see AI transforming the future of marketing in your industry or company? Are there any marketing tasks where generative AI might dominate or replace the need for human employees?

3.4.2 Interview guide for the marketing CEO

- 1. To what extent have you incorporated or worked with features of generative AI in your marketing tasks? (*i.e. text-writing, content-production, writing e-mails*)
- 2. Which generative AI software are you aware of that is being used by either you or your department? (*i.e. Chat GPT, Midjourney*)
- 3. Can you provide specific examples of work tasks where you have used generative AI in the process? (*i.e. responding to e-mails, creating marketing texts, generating ideas, creating or reformulation marketing content*)
- 4. How do you evaluate the effectiveness and performance of generative AI for assisting in your general work tasks? (*i.e. is it useful, potentially useful or useless*)
- 5. How do you see AI transforming your marketing work tasks in the future? And how do you ensure that you stay updated with the latest advancements of AI?

Having chosen an exclusively qualitative to approach I want to express awareness of methods such as usability-testing and eye-tracking to supplement interviewing. It can be argued that eye-tracking and usability testing have certain benefits for examining participants that interviewing method alone do not (Bergstrom & Schall, 2014). These methods and the limitations of why I did not adopt them in the following project are further discussed in chapter 6.0



3.5 Approach to analysis: Thematic analysis

Having conducted a vast amount of empirical data about the participants' use of AI during marketing practices I decided to adopt Braun & Clarke's (2006) six-step approach to performing a thematic analysis for the coding process and the structure of the analysis. During the six-step approach, the research team should become familiar with the data, code, generate themes, review the chosen themes, and finally summarize the themes in the writing of the analysis (Braun & Clarke, 2006, p. 35).

Table 1: Phases of Thematic Analysis

Phase	Description of the process
1. Familiarising yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Figure 6: Presenting Braun & Clarke's six-step approach to performing a thematic analysis retrieved from an open-access research article (Braun & Clarke, 2006, p. 35).

3.5.1 Familiarization with empirical data



In accordance with Braun and Clarke's (2006) recommendations, the research team should initiate the first phase of the thematic analysis process by familiarizing themselves with the data through activities such as transcribing, reading, and potentially re-reading the empirical data to identify preliminary coding patterns (Braun & Clarke, 2006, p. 16-17). During this phase, I first transcribed the data from the interviews and then went through all the three transcripts looking for initial patterns in relation to project RQ's (see section 1.2). All the transcripts can be found in appendix 3, 4 and 5, and will be referred to several times throughout the analysis as: A(x), time stamp.

3.4.2 Generating initial codes

Braun & Clarke states that once the research team has become familiar with the data, the coding process can be initiated. During this phase, the research team should identify meaningful coding patterns based on either a theory or a data-driven approach (Braun & Clarke, 2006, p. 18). The coding process can be performed by taking notes in the transcripts, colorizing with pens, or by using physical posters (Braun & Clarke, 2006, p. 19). Having gone through the transcripts I started generating initial codes that I perceived as meaningful for providing knowledge in relation to the investigation of the research questions in section 1.2. All paragraphs selected were initially marked with the same color and later divided into concrete themes. During this step, I also made the decision to perform a data-driven coding approach due to the pragmatic research emphasis of the project (see section 1.4).

3.4.3 Searching for themes.

Having established a long list of initial codes, I proceeded to step three of Braun & Clarke's six-step approach to performing a thematic analysis: searching for themes. "This phase, which re-focuses the analysis at the broader level of themes, rather than codes, involves sorting the different codes into potential themes, and collating all the relevant coded data extracts within the identified themes" (Braun & Clarke, 2006, p. 19). The criteria that I set up for each of theme was that the theme should serve the purpose of categorizing codes into an area of how AI was – or was not – used by the



Inbound CPH employees. During this iterative process, I navigated between the *search phase* and the *reviewing phase* of Braun & Clarke's guide multiple times.

3.4.4 Reviewing and defining themes.

During the reviewing of themes phase the research team should revise, question, and seek to legitimize the chosen themes from the previous phase. Through this process, the finalized themes can be defined and named for the writing of the analysis (Braun & Clarke, 2006, p. 20). Braun & Clarke also states that the research team should provide transparency during this process, to increase reliability and ensure that both the researcher and reader will understand what each theme contains (Braun & Clarke, 2006, p. 22). Having reviewed and revised themes based on their ability to provide knowledge about the project RQ's (see section 1.2) I ended up with the following themes below, with the bold themes categorized as main themes, and the non-bold themes as the content within the main themes. Each theme will be analyzed in chronological order in the last step of Braun & Clarke's six-step approach to performing a thematic analysis: *Producing the report*.

Name of themes	Description of codes
General awareness of AI	Codes concerning the participants initial thoughts on the introduction of generative AI in marketing.
Impact of generative AI on marketers	
Generative AI for insights	Codes concerning participants use of generative AI for acquiring knowledge or insights.
Generative AI for text production	Codes concerning participants' use of generative AI in text production
Generative AI for production of imagery	Codes concerning participants' use of generative AI for production of AI imagery.
Impact of generative AI on marketers	



Education of generative AI	Codes concerning the organizational education of marketers in generative AI.
Using generative AI in teams	Codes concerning the use of generative AI in agency teams.
The future of generative AI for agencies	Codes concerning the participants statements of future generative AI use in their agency.



4.0 Analysis

The following section contains the project analysis of the conducted empirical data deriving from the contextual inquiry and the three post-inquiry semi-structured interviews (see section 3.2 & 3.3). Throughout the literature deriving from section 2.4 and 2.5, the participant statements, participant quotes, re-constructions of work-related screenshots will be analyzed thematically for the reader. The points that are being extracted in the analysis will ultimately form the substance for the conclusions drawn in the project findings chapter 5.0. The following illustrations summarize the main points deriving from the analysis, each circle of the illustration will be uncovered throughout the analysis.

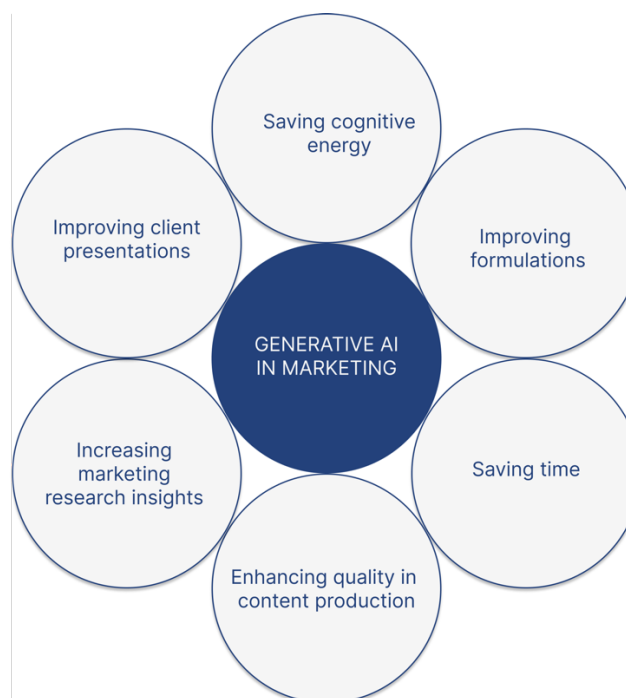


Figure 7: Visualizing the overall benefits of utilizing generative AI for marketers and marketing agency in their every-day work tasks, uncovered through analysis of participants statements and inquiries. The bullet-points of model are a simplification of the detailed project findings covered in chapter 5.0.



4.1 The participants general awareness of AI in marketing

Throughout the semi-structured group interviews, it became evident that all of the three marketer participants were aware of AI being used in marketing and that they themselves, had used it to a certain extent to perform some of their daily marketing practices (A3, 00:45; A4, 02:46; A5, 01:05).

One participant had been aware of AI for a couple of years but had especially begun to implement it in business-related terms over the last 12 months due to the development of generative AI features (A3, 00:45; 01:45). Similar experience derived from another participant stating that he had adopted generative AI into his digital marketing agency as he had viewed the emergence of Chat GPT back in late 2022 as business-critical for his digital marketing (A5, 02:46). The third participant had introduced generative AI rather recently and was exclusively using features of Chat GPT due to a lack of knowledge on how she could apply it further (A4, 01:56). Statements from all the participants indicated that they all used generative AI and that they all were aware of the emergence of generative AI in organizations. This broad awareness of generative AI as having recently emerged into marketing industry generally aligned with the research done by Cao et al. (2023) suggesting a marketing trend of generative AI (see section 2.4.3).

When questioned about the difficulty of implementing the new technology of generative AI into the participant's general marketing tasks they all had different perceptions of the new technology. One participant had experienced rather immediate benefits with the new technology helping him in the content production and research process (A3, 01:45). Another participant similarly found generative AI to be extremely useful from the start but stated that some of his employees had viewed the change in technology as an obstacle and a potential threat to their jobs (A5, 04:09). The third participant was at the belief that generative AI had been helpful to her but that the learning curve had been quite difficult and that it made her refrain from using certain generative AI features (A4, 07:12; 10:59; 12:25). In general all of the participants agreed that the implementation of AI had brought significant possible changes to their marketing personal work practices (elaborated in section 4.2.1 and 4.2.2).



For two participants they argued that only creativity set the limits of their use as AI as it required no education to get started (A3, 23:43; A5, 12:27). The third participant argued that the complexity of learning how to utilize the technology was rather high, indicating that generative AI required some skills to implement in marketing practices (A4, 10:59; 12:25). The organizational implementations, and how the experienced had learned to utilize the technology is further elaborated in section 4.3.1 and 4.3.2. In the following parts of the analysis, I will thematically uncover to what extent each of the participants had experienced benefits, limitations, opportunities, and obstacles when utilizing generative AI features to perform AIM tasks. The thematical structure takes basis in two main parts: The generative AI implications on marketers, and secondly the generative AI implications on marketing agencies.

4.2 The impact of generative AI for marketers

When asked about the participant's use of generative AI for concrete marketing tasks, it became evident that all the participants utilized AI to assist them in general tasks that they previously would have had to do manually (A3, 01:45; A4, 01:05; A5, 08:07). Primary marketing tasks where the participants all unambiguously utilized generative AI was in the areas of performing marketing research, text-production, and production of imagery.

4.2.1 Utilizing generative AI for marketing-research

When asked about the impact of generative AI the participants all mentioned that it had been significantly useful for them as a market research tool to simplify knowledge, saving them both time and brain-power (A3, 02:03; A4, 05:23; A5, 07:20). One participant utilized Chat GPT regularly to do marketing research where she would ask the AI questions about information about general traits of the consumer targeting group to understand them better (A4, 07:20). In the following re-created illustration deriving from the contextual inquiry, the participant demonstrated that Chat GPT has helped her when understanding the general consumer humor in Finland:



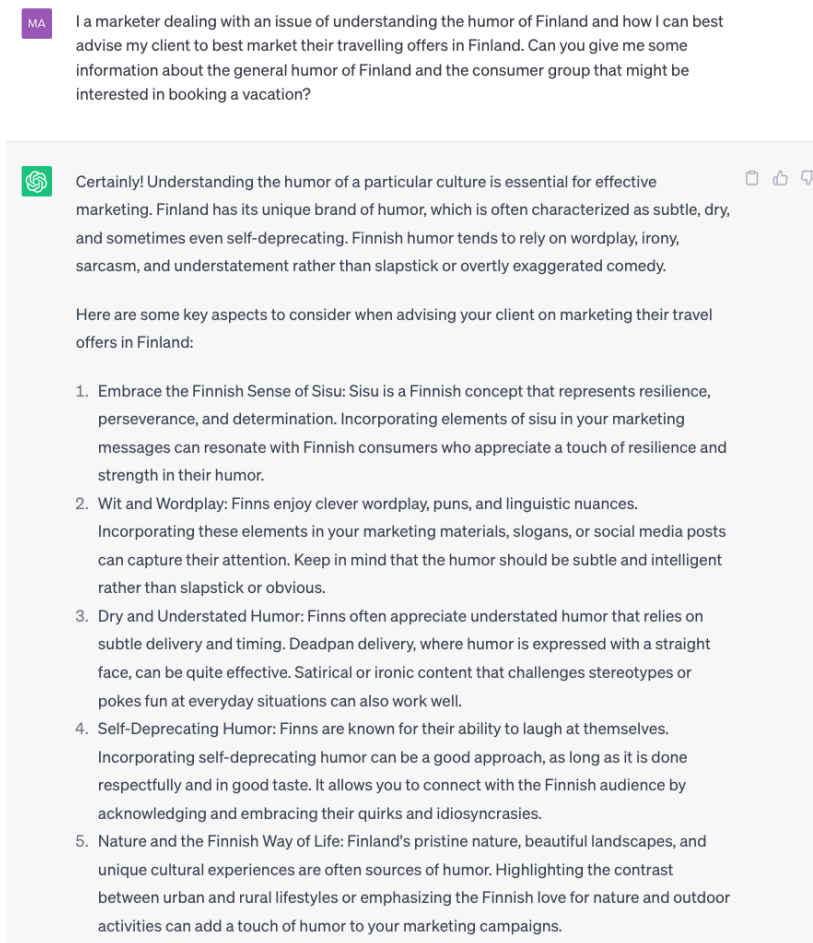


Figure 8: A re-construction of the question a participant asked Chat GPT to generate an answer for during the contextual inquiry observation. Please note that demonstration above is not the exact illustration as specific client names were incorporated.

While recognizing the need to severe double-checking of facts provided by Chat GPT in sensitive areas (A4, 07:58) the participant argued that Chat GPT allowed her to get an initial understanding of consumer markets extremely fast compared to the time it would take her to scroll through Google's results manually (A4, 05:02). Similar views were expressed by the two other participants that both described Chat GPT as a jump-starter that would allow them for an easy start into consumer and market research (A3, 07:51; A5, 06:45). One participant described the knowledge-base of Chat GPT as a stress-reliever that had allowed both him and his co-workers to easier initiate complex tasks that before AI would normally be put aside for later (A5, 07:00). An example occurred doing the contextual inquiry where the same participant had to create a complex presentation



for why a client should renew their contract with the marketing agency. Here, the participant asked for ideas on how to structure the presentation for the existing client:

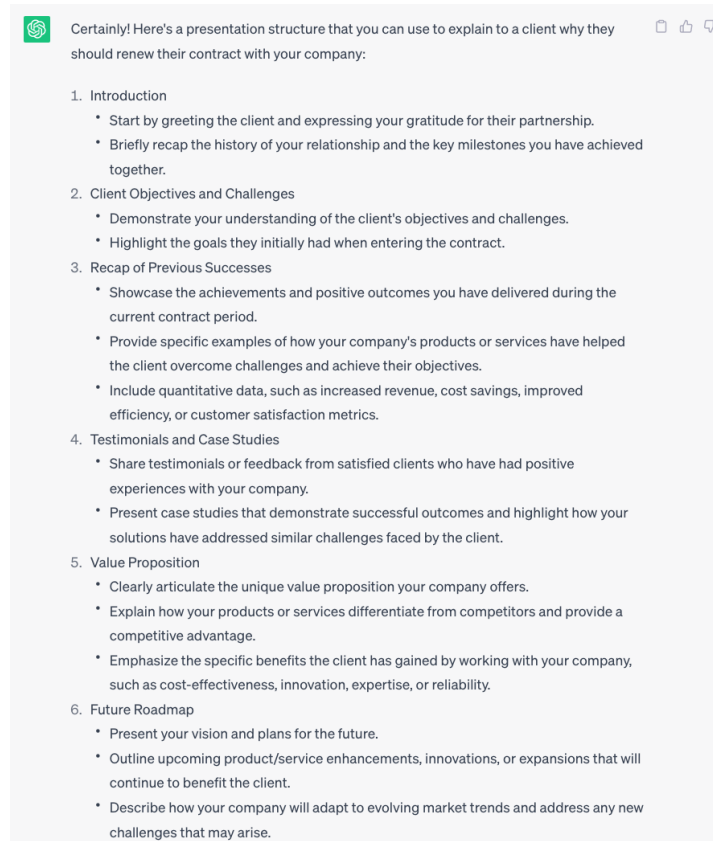


Figure 9: Illustrating a participant's usage of Chat GPT to generate ideas on how to structure a client presentation with the purpose of getting the client to renew their contract with the agency.

The participant stated that he felt that Chat GPT was like having an expert next to him at all times, and that manual work tasks like the one above used to take him a lot more time (A5, 07:20, 08:07). Similar success with utilizing Chat GPT for the structuring of content and ideas was expressed by another participant, stating that it was easy and efficient (A3, 07:21). When asked further into the use of Chat GPT and client interactions, it became evident that one of the participants also had used quite extensively to provide research on consumer target groups, their needs, goals, behavior. He had then went on with this information and presented it for clients of his agency with great success (A5, 08:20). However, it was noted by the same participant that if Chat GPT was utilized for factual research sparring that the information should be double-checked as the limitations of AI was that it



would sometimes make up answers due to a lack of knowledge in complex areas (A5, 18:02). But the pro's of utilizing generative AI as an expert in most areas was much more present for the participant, stating that the AI was performing tasks better than what even he was able to manually (A5, 07:25).

Furthermore, it was shown through the contextual inquiry that the participants would also utilize features of generative AI for more advanced marketing research tasks. One participant stated that he even used Chat GPT for research in competitor analysis and strategy suggestions (A3, 02:26). The following example was observed during the contextual inquiry where the participant gathered initial information about competitors in the field of car leasing:

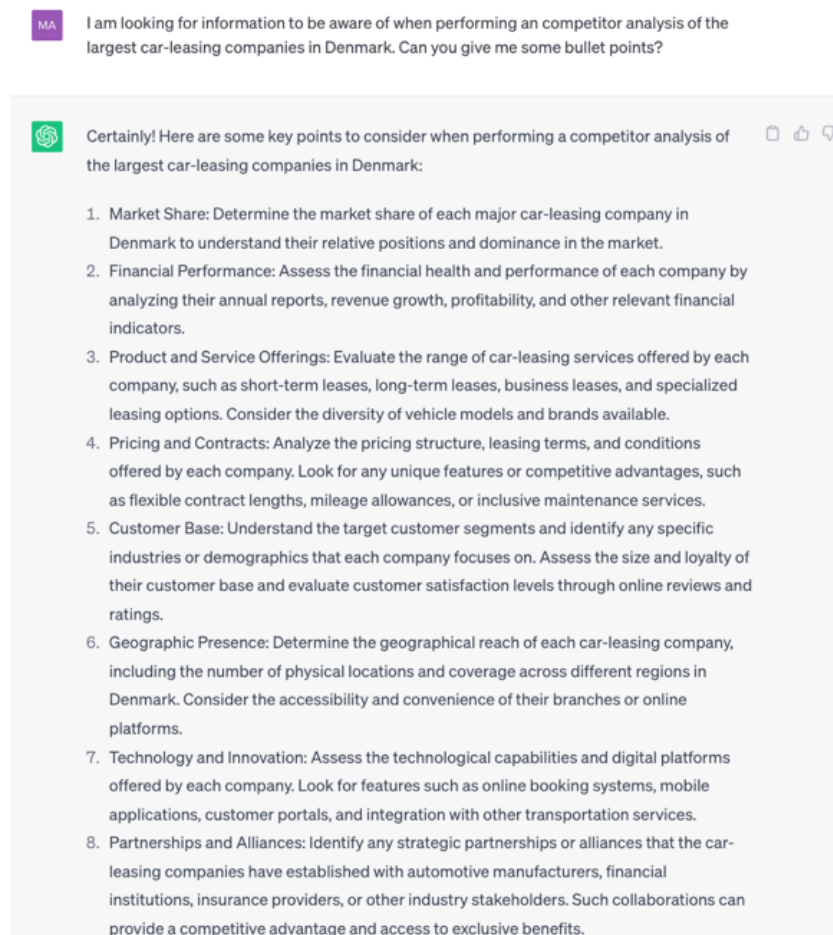


Figure 10: Illustrations of a participant's utilization of Chat GPT to perform initial research on the market for a potential new client in the car-leasing business.



The participant had experienced significant benefits with the use of generative AI, leading him to predict that a lot of the future brainstorming in marketing would be replaced with AI research methods (A3, 18:41). In general, all of the participants had experienced immense time-saving on manual research tasks with the help of AI-based research within Chat GPT (A3, 15:19; A4, 10:15; A5; 08:20, 17:47). Some participants even suggested an increase in the quality of the knowledge and insights gained in certain areas (A3, 18:41; A5, 08:08) but at the same time, concerns were expressed for utilizing AI in contexts where facts were of extra importance, and the participants believed in always double-checking the generated texts (A4, 07:58; A5, 18:02). This section inspired the overall circle of ‘saving cognitive energy’, and the circle of ‘increased marketing research insights’ illustrated in figure 7.

4.2.2 Utilizing AI for production of text.

Another area where all the participants utilized generative AI to minimize the manual work required in their daily marketing practices was to produce text in the forms of articles, blog posts, answering e-mails, and more (A3, 05:23; A4, 01:05; A5, 07:41). Multiple participants described the text production feature as their most used generative AI feature by far, allowing them to save time and produce high-quality texts almost automatically (A3, 06:00, 10:28; A4, 05:47, 14:27). The way the participants would produce texts is typically through what is called a prompt (A3, 05:31; A5, 05:29). A prompt was described by one participant as the specifying instruction of to the tool (Chat GPT for instance) where the human describes the criteria of what should be produced to the AI (A3, 03:00). The same participant stated that technology had reached a point where he felt that with the right prompts of Chat GPT he could write articles and blog posts for clients much faster, and of a super high quality (A3, 15:19, 16:11). During the contextual inquiry he provided the following example for what it might look like:



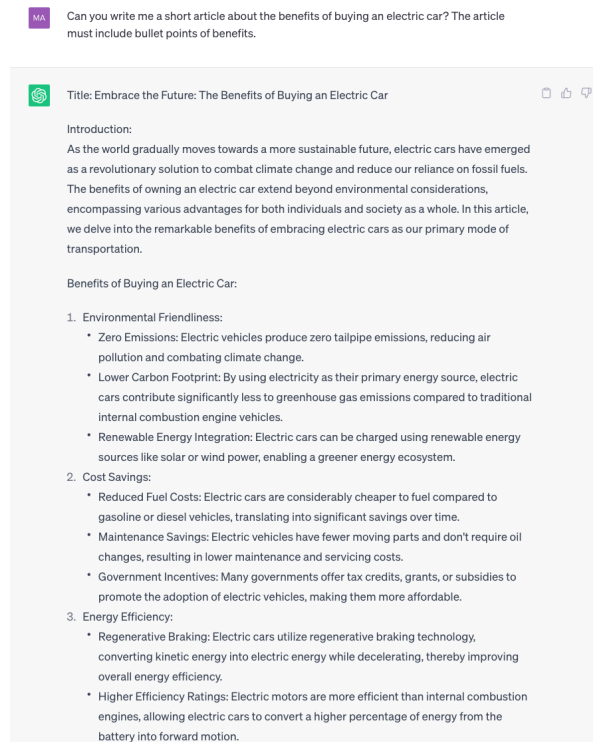


Figure 11: Illustration of a participant's use of Chat GPT to generate the body of text for an article on electric cars.

The usage of Chat GPT for text production was described as of very high quality by the participant (A3, 06:00). However, the participant did mention that he typically would spend a little extra time on editing the AI generated text results to ensure that facts were correct, and feelings were incorporated in a way that he believed AI sometimes did not (A3, 15:49). Similar usage of AI to produce text for clients was described by another participant, stating that there was an immense difference in the time it would take to edit a text compared to having to generate it from scratch (A4, 14:27). She would mainly use Chat GPT brain-power when having to explain marketing concepts for clients that she already knew, but that could take time her plenty of time to formulate properly (A4, 03:32, 07:12). When observing her during the contextual inquiry the participant demonstrated the following example:



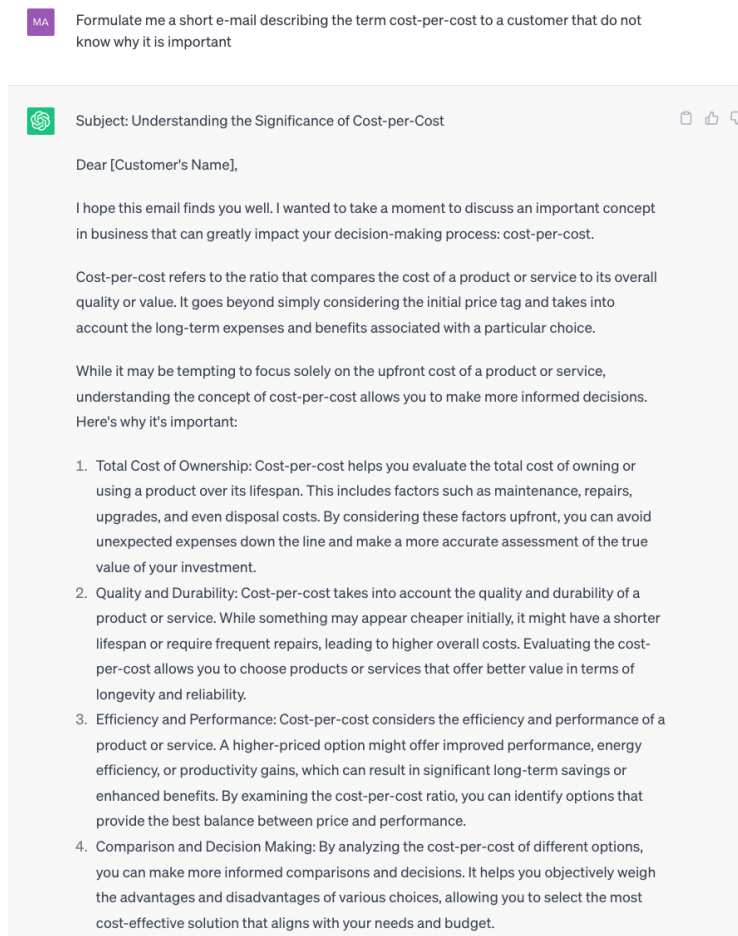


Figure 12: Illustrating a participant's utilization of Chat GPT to easily produce a formulation of a marketing term to a client, that she could simply fact check and pass on.

The participant would typically have all the knowledge needed to describe the term but she experienced that Chat GPT as very helpful to use feeling tired or overwhelmed by many marketing tasks at once (A4, 04:06, 07:12, 14:27). Similar statements were made by another participant describing that Chat GPT helped him save cognitive energy doing the content production process (A5, 06:45). The same participant also described that the whole marketing department within his organization had started to utilize generative AI in the writing process when creating newsletters, content on their website and posts across different marketing channels (A5, 13:44).

All of the participants in general used the features of Chat GPT to generate content in the form of text to a rather large extent indicating the importance of the generative AI's ability to produce for



them, and minimizing the manual writing process. Examples of text genres generated by the participants doing the contextual inquiry ranged from articles, blog posts, newsletters, social media posts, and client e-mails (A3, 15:19; A4, A5, 13:44). However, choosing the right prompts was important for some of the participants when ensuring originality and quality in generated AI texts, indicating the continuous need to have some knowledge about the topic that is being written about for it to be great (A3, 05:23; A5, 18:02). This section inspired the overall circles in figure 7 of ‘enhancing quality in content production’, ‘saving time’, and improving formulations’.

4.2.3 Utilizing AI for production of imagery

When questioned about the participants' use of generative AI to produce imagery, the participants had slightly conflicting experiences with generative AI imagery software. One participant found it very interesting and innovative but had used it very sparingly for his clients up until this point (A3, 11:40). Another participant stated that the marketing department had used it quite experimentally, but that that is was mostly for templates (A5, 14:00). The third participant had used it very minimally due to a lack of skills in the technology but was optimistic that it could minimize manual work drastically for her team in the future (A4, 07:20, 15:20).

During the semi-structured interviews, a participant stated that he had seen and used features of DALL-E and Mid Journey, and that he had seen some fine demonstrations of use within marketing (A3, 10:03). The participant stated that he found the generative AI valuable for generating content that could be used as display banners and background photos, but that the technology was lacking in quality when generating humans and human faces (A3, 10:28, 16:36). Doing the contextual inquiry, the participant demonstrated the following two examples of a human on the left and a landscape on the right to illustrate his view on AI imagery:





Figure 13: A participants illustrating two pictures generated by the AI imagery software of Mid Journey, arguing that AI imagery is better for generating landscapes that human beings.

In general, the participant questioned the current technology's ability to produce high enough quality content that their clients would really enjoy using for their brand (A3, 16:59). However, he did believe that the benefits of being able to generate copyright-free pictures at a fast rate would significantly change content-production in the future and put the need for stock photo databases under pressure (A3, 04:52, 17:26). Another participant described a similar excitement about generative AI's ability to generate imagery in the future, stating that it would greatly decrease the time being used in her team to generate content (A4, 15:20). The participant had found the generative AI software Mid Journey rather difficult to use for business-purposes. However, during the semi-structured interview she argued that she was already using a form of generative AI within Microsoft PowerPoint to assist her in creating templates for client presentations (A4, 06:11). To demonstrate her point during the contextual inquiry the participant opened an empty PowerPoint presentation and showed the following example on her screen:



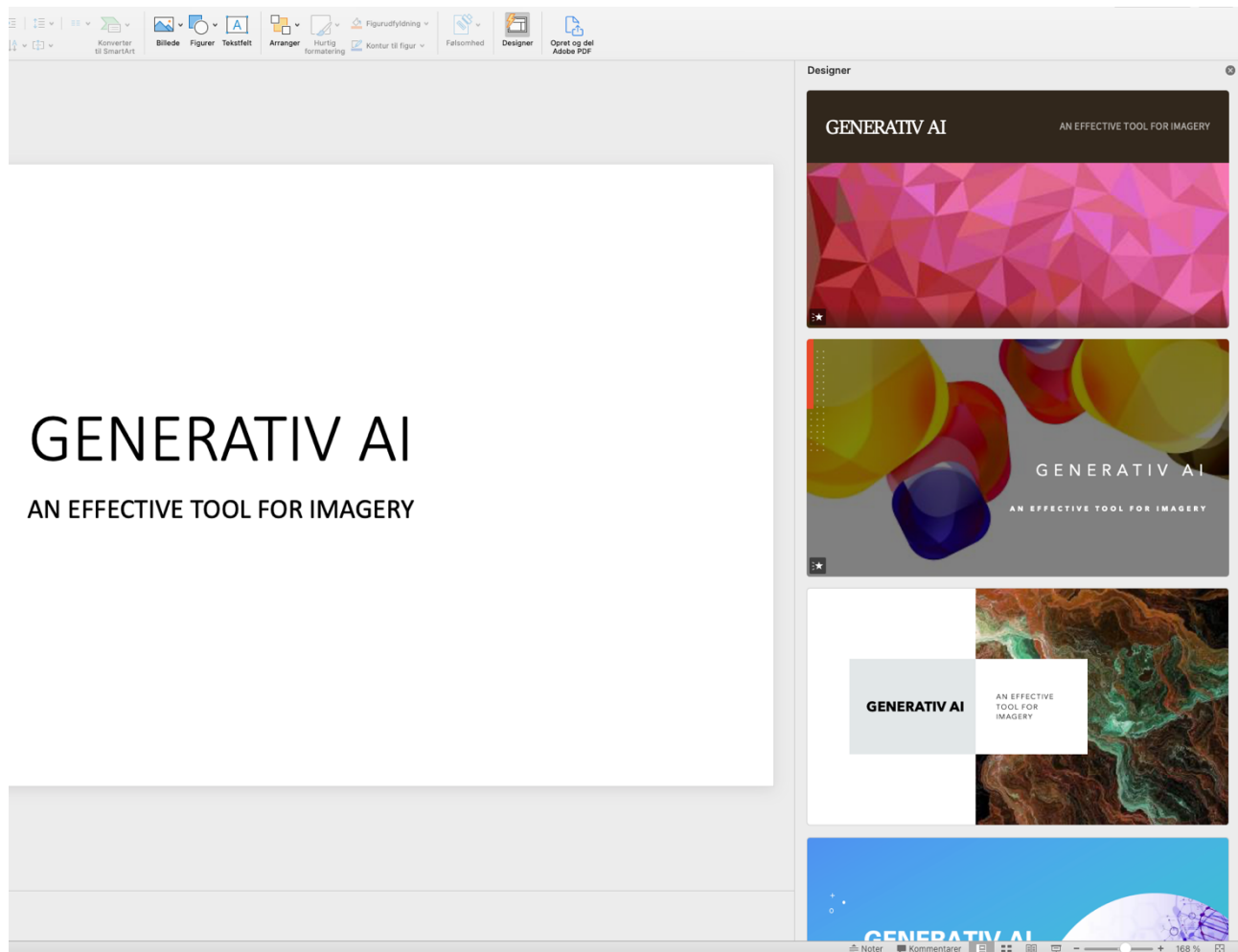


Figure 14: Illustrating the ‘designer’ feature in Powerpoint, that automatically generates layout-suggestions based on the user’s inserted content.

The process of creating client presentations was a very time-consuming process for her team, so the participant would look into utilizing generative AI imagery software’s much more in the future (A4, 06:11, 15:20). In general all of the participants was aware of generative AI software’s such as Mid Journey and DALL-E. However, the semi-structured interviews and inquiries revealed that the former two areas of AI research and AI text-production was perceived as much more important by the participants at the current moment to minimize the amount of manual marketing work for them (A3, 10:35, A4, 07:20, A5, 14:00). This knowledge general aligns with existed literature on AI imagery (see section 4.2.3), suggesting limitations in the use of AI imagery at the current moment of the technological development.



4.3 The impact of generative AI for marketing organizations

When asked about the participants experience of generative AI being implemented into their marketing organization it became evident that all the participants had experienced changes in their organization over the last year. Primary effects on marketing agencies had been the education of how to use generative AI, the new team-work practices, and future considerations of how the participants are benefitting and limited in their use of AI in marketing.

4.3.1 Education of generative AI in marketing

Through data analysis of semi-structured interview data, it became clear that all the three participants had undergone an introduction to the use of Generative AI rather recently (A3, 00:45; A4, 02:46; A5, 01:05). When asked initially if it required any form of education to start utilizing generative AI, one participant answered close to none (A3, 23:41), another participant answered some education (A5, 18:02), and a third participant believed it required quite a bit of knowledge (A4, 10:59).

The participant who answered that the implementation of generative AI almost required no education at all, had utilized the technology in about a year, allowing him to complete marketing tasks such as content production much faster (A3, 00:45). The participant was primarily self-taught but had learned through trial and error within his marketing company. While the participant believed absolutely every marketer could benefit from generative AI, the participant also emphasized the importance of employees being able to use prompts and think creatively (A3, 05:23, 22:29).

Another participant answered that the use of generative AI required a certain amount of education and that he had been the first self-taught in his marketing agency to implement features of Generative AI (A5, 02:46, 03:13). The participant had been educating his employees through workshops, and on-going lectures, believing that it would benefit the organization as a total (A5, 12:53). The participant had viewed the trait of being able to utilize AI as business-critical, and he had insisted



on his employees adopting it (A5, 17:47). The workshops would take place with a few employee's being 'super-users' that would be educated to help their co-workers implement features of generative AI as well (A5, 12:53).

In general, he experienced that his employees initially felt concerned about the new technology and that they had been reluctant to utilize it, as they viewed generative AI as a threat to their job (A5, 04:09). However, the agency had now reached a point where every employee in the marketing department was using generative AI such as Chat GPT to perform daily marketing work tasks, saving the agency a vast amount of resources (A5, 13:44, 17:47). The participant argued that it would always be business-critical for a digital marketing agency to stay up to date with the new emerging generative AI technology (A5, 02:52). He did however, emphasize the need for still having the best marketing humans in order to produce the results generative AI marketing content (A5, 19:00).

The third participant who stated that the emergence of generative AI features had been challenging, stated that she had been introduced to generative AI through workshops at her workplace. However, she still felt that the technology was rather challenging and that the accessibility, and her lack of education generative AI were holding her back from utilizing it more (A4, 10:59). However, the participant mentioned during the semi. structured interview that she was planning to invest more time in learning generative AI, so her organizational department would utilize it more (A4, 12:09, 12:25 15:17).

4.3.2 Collaboratory use of generative AI in marketing

During the contextual inquiry, one of the participants revealed that he had developed a tool for his co-workers to utilize the generative AI features of Chat GPT in teams when working on content production for clients (A5, 09:39). The participant described this tool as Work GPT, a Google Chrome plug-in that would allow the employees to save prompts, share prompts, and categorize prompts for different clients of the agency (A5, 08:53). This process allowed the co-workers to enhance the quality, and enhance efficiency of work when having to produce text in the client's tone-of-voice across different marketing channels (A5, 10:28).



The participant stated that the collaboratory use of Work GPT had benefitted his organization, allowing employees to easily create and share generative AI prompts for clients (A5, 10:02, 10:28). The tool had even been so successful that the participant has begun to offer it as an extra service to clients, providing them with an understanding of his digital marketing agency as generative AI experts (A5, 11:13). While none of the two other participants indicated that they had used generative AI in team-working practices, one other participant did mention had he believed that marketing agencies in the future probably would incorporate a structured prompt approach for their clients (A3, 19:26).

4.3.3 The future of generative AI for marketing agencies

When questioned about the future of generative AI in marketing practices, all of the participants stated unambiguously that they believed AI to be an increasingly important tool within marketing (A3, 29:14; A4, 12:09; A5, 19:32). The participants specifically commented on three areas: Generative AI's impact on marketing jobs, generative AI's impact on agency clients, and the development of generative AI marketing features in the future.

4.3.3.1 Generative AI's impact of marketeering jobs

Two of the participants taking who had the role of CFO and CEO in their marketing organizations, both stated that they did not believe that generative AI had or would have the ability to replace the jobs performed by human marketers (A3, 26:49; A5, 19:00). One participant stated that he believed that marketeers would learn to challenge the prompts of generative AI, and indicated that the technology always would require a creative human brain in order to perform well in marketing (A3, 20:38). Another participant similarly stated the importance of having the best human marketing employees, and that he believed that his employees could even learn to sell aspects of the technology to clients (A5, 16:14). However, it was suggested that generative AI ultimately would become a discipline that marketing agencies would have to know to stay competitive in the field (A5, 19:00).



4.3.3.2 Generative AI's impact on agency clients

When questioned about the clients continuous need to hire external marketing organizations for their tasks, the participants did not express any significant worry (A3, 26:49; A5, 19:12). One participant argued that clients always had have the same technology available as the marketing agencies but had refrained to use it due to difficulty and complexity. The participant viewed the generative AI technology as a rather similar situation (A3, 26:33). Another participant similarly suggested that there always would be a need for marketing specialists and that strategic and operational marketing generative tasks always would have a complexity about them that generative AI alone could not solve. However, one participant did say that the client's ability to generate text, articles, and blog posts easily could put marketing agencies under pressure (A3, 26:26).

4.3.3.3 Generative AI's impact on marketing practices in the future

When analyzing the semi-structure interviews, it became evident that all the participants had certain expectations for how generative AI would help them in future marketing, primarily in relation to the obstacles the participants currently had.

Multiple of the participants predicted that marketers would have to improve in their prompting skills in the future, making generative AI a vital tool to save time and resources within a digital marketing agency (A3, 15:19; A5, 17:47). One participant predicted that Chat GPT only would get better with the new development in technology and that it would provide more opportunities for the marketers to utilize in their work (A5, 16:20). Similar views were expressed by another participant, stating that generative AI most likely would transform the needs for traditional brain-storming practices (A3, 18:41).

Multiple participants expressed a desire for AI imagery software's such as Mid Journey and DALL-E to improve, leading them to better use of AI imagery in marketing with a higher quality of photos, videos, and client presentations (A3, 11:40; A4, 15:20). One participant predicted specifically that generative AI would become increasingly useful for client presentations, stating that companies



such as Google Workspace already were looking into automatization features (A4, 15:32). Another participant argued that AI imagery could replace the need for photo stock databases, but that the quality of the imagery would have to be improved when constructing humans, human faces, and videos in general (A3, 21:08).

In general, observations from the contextual inquiry along with the participant predictions of AI in the future of marketing, indicated that there still are very present limitations in the current generative AI software available to marketers. While generative AI software's such as Chat GPT, Mid Journey, and DALL-E allowed the participants to save time, and brain-power, and increase quality in certain areas of marketing, there was still a clear need for human marketers to tailor and double-check the AI-generated content. In general, these points align with the presented literature, describing generative AI as an extremely effective tool for producing content - but only if utilized in accordance by humans.



5.0 Results & conclusion

In the following section, the project findings are presented in relation to each of the four RQs presented in section 1.2. Throughout this chapter key findings deriving from literature review (see section 2.4 & 2.5) and thematical analysis (see chapter 4) are summarized for the reader, ultimately forming the project conclusion and the content of the project abstract. All the project findings below will be subject to further discussion in terms of validity, reliability, and transferability in chapter 6.0

RQ1: What characterizes Generative Artificial Intelligence, and how does it work?

Based on knowledge deriving from the conducted literature review examining the area of AI in general and generative AI, the study concludes that generative AI is a form of artificial intelligence that has the specific ability to produce novel text, imagery, and other forms of media. Generative AI can be characterized by its ability to imitate human behavior in conversations and through content production, where the technology will allow the user to produce text and media outputs. Common examples of generative AI technology are in the popular generative AI software such as Chat GPT, Mid Journey, and DALL-E. Through the chat function within this generative AI software, the user can instruct the technology with instructive prompts, allowing the user to generate fast and specifically tailored text and imagery outputs. Furthermore, it is concluded within the literature review that generative AI has recently become a widely popular and accessible tool, that can be utilized in all industries to enhance aspects of content production.

RQ2: How do marketers utilize Generative Artificial Intelligence in their main marketing practices?

Based on knowledge acquired through the literature view and thematical analysis, the study concludes that marketers utilize generative AI features in the gathering of marketing insights, in the



producing of various genres of text, and partly when creating client presentations. Through a set of inquiries, and a set of semi-structured interviews, it was revealed that all of the participants would use Chat GPT in their daily work to generate marketing insights when having to do: Competitor analysis, consumer-analysis, persona-analysis and when seeking a better understanding of consumers and characteristics of foreign markets. The participants would interact with Chat GPT, asking the generative AI software questions, and using the generated outputs to proceed with their everyday marketing task. Results deriving from participant statement and actions shows that marketers can utilize generative AI to improve their efficiency when doing marketing searching, allowing them to gain quality insights, and save time while also saving cognitive energy in the process.

In conjunction with findings from RQ2, it is concluded that marketers utilized Chat GPT regularly in their marketing practices to produce different genres of texts in their everyday marketing tasks such as Articles, blog posts, social media posts, e-mails, and general website-content. The participants would utilize specific prompts in Chat GPT to generate marketing headlines, and structures of texts, and to reformulate examples of existing text and marketing terms to clients. Based on participant actions and statements described in the thematical analysis, it is concluded that text production had been one of the most influential areas for marketers when performing daily marketing practices. Especially the use of Chat GPT to get started in the writing process was utilized regularly by the marketers, allowing them to save time, and cognitive energy, and enhance aspects of work quality and creativity.

Furthermore, based on the thematical analysis results it is concluded that none of the participants utilized generative AI imagery software such as Mid Journey and DALL-E-2 to any significant extent. While the participants stated that generative AI could significantly reduce time spent in their daily marketing work, the marketers currently did not utilize generative AI imagery in their work due to the difficulty of use and a lack of quality outputs.

RQ3: To what extent has Generative Artificial Intelligence been incorporated by marketing organizations?



Based on results deriving from thematical analysis, I conclude that certain marketing organizations utilized workshops, lectures, and team-working tools to ensure the incorporation of generative AI software such as Chat GPT into their marketing agency. The value of generative AI was viewed as of high importance, and it was a priority to ensure that employees were educated on how to use the technology in their daily tasks. Furthermore, results from the thematical analysis revealed that multiple participants expected that generative AI would eventually become a marketing discipline that digital marketing agencies would have to master for them to stay competitive. Based on inquiries and thematical analysis, it is concluded that while generative AI had been an impacting factor on the efficiency, and resource management in marketing organizations, the technology had not reached an extent where it made marketing employees redundant for agencies in any way.

RQ4: To which extent can Generative Artificial Intelligence be used to assist the marketer in their everyday work tasks?

Based on the literature review and results from the thematic analysis, I conclude that generative AI had have a considerable positive impact on the marketer's ability to save time, save cognitive energy, generate insights, and enhance the quality of content in the marketer's everyday tasks. Furthermore, it is concluded that the generative AI software Chat GPT had the ability to assist marketers when performing marketing research, during content production, and in general client communication tasks. However, results deriving from the thematical analysis did in no way indicate that the generative AI technology had the capable skills to replace the need for human marketing employees or down-scale marketing departments. The extent of the marketer's usage of generative AI was fairly limited in areas such as creating AI imagery, creating client presentations, and when performing factual research. Lastly, it is concluded that the extent of the marketer's usage of generative AI also depended on the marketer's knowledge of how to utilize the technology. Findings based on literature and theatrical analysis suggest, that the future of generative AI in marketing would be dependent on two things: 1) The development of generative AI technology itself, and 2) the marketing employee's ability to utilize the features of generative AI in accordance with everyday work tasks.



6.0 Discussion of results

In the following section, the validity, reliability, and transferability of the project results are discussed and reflected upon. This chapter includes final thoughts on the project findings, as well as limitations in findings, and the opportunity to build on the project findings in future research. Lastly, a discussion of how the project results contribute to the general research is provided.

6.1 Validity of findings

The term *internal validity* refers to the extent that the research team can ensure a cause-and-effect relationship in the research design and findings, while the term *external validity* refers to the extent of how the study results can be generalized to other contexts (Bryman, 2012, p. 363). When reflecting on the internal and external validity of project findings, I particularly find three areas worth discussing: 1) Research design and research methods, 2) participants and resources, and 3) the difference in general marketing practices.

When reflecting on the chosen research design, I initially tried to ensure that the research design would adequately cover each of the RQ's presented in section 1.2. On one hand, it can be argued that the chosen design allowed for detailed observations and conversations with the participants, specifically outlining where generative AI made had an impact on their work. On the contrary, it can be argued that the very low sample size, combined with the broad research scope, and no structured marketing tasks, makes it increasingly hard to justify a strong cause-and-effect relationship within the main project findings. However, while recognizing the obstacles of choosing a broad research scope with few methods and a small sample size of participants, I would still argue that the chosen research design allowed for adequate examination of a cause-and-effect relationship between marketers and their use of generative AI. Meaning that the emphasis of the study never was to compare specific marketing tasks with and without the use of generative AI in a laboratory setting. Instead, the research scope was meant to investigate the overall impact of implementing generative AI in marketing work tasks and to indicate if there would be reasons for conducting further



research into this area. Based on these research goals I would argue that the internal validity of the study can be considered fairly good. However, I as a researcher highly recognize limitations in the study's ability to prove a direct correlation between exclusively the generative AI technology and the marketer's experience of enhanced efficiency.

When reflecting on the topics of participants and sample size, I recognize fair criticism of the study's external validity, and the finding's ability to be referred across different marketing organizations with different marketing tasks. Meaning, that only three participants were selected for the study, and that their marketing tasks were specifically related to content production which generative AI excels in. On one side, it can be argued the study should specify that results of generative AI usage mostly apply to specific organizations which specific needs for content-production. On another hand, it can be argued that the study findings are still applicable to all marketing agencies, as the listed effects of generative AI have reached an extent where it is affecting the marketing industry as a whole. Indicating that while the participants' specific experiences with generative AI cannot be transferred onto the experiences of different marketing agencies, the benefits of utilizing generative AI for universally required marketing tasks still can.

6.2 Reliability of findings

The term *intern reliability* refers to the accuracy of data instruments leading to the project findings, while *external reliability* characterizes the to which extent the study can be replicated (Bryman, 2012, p. 363). When reflecting on the reliability of the project findings I specifically find it relevant to discuss the following areas: 1) transparency in research methods, 2) accessibility of resources, and 3) replicability of research.

Concerning the topic of transparency in research methods, I would argue that the study can be subject to severe criticism due to the contextual inquiry videos not being available to the public. On one hand, it can be argued the vast amount of video data encountered in the contextual inquiry, making it impossible for other researchers to know the exact contexts of the analysis illustrations, and being able to replicate similar usage of inquiry. On the contrary, it can be argued that the set-up of



contextual inquiry was described in detail and that the inquiries did not contain any unique circumstances that differentiated them from typical marketing agencies. I would also argue that the interview guide is freely available, along with all the transcripts from the semi-structured interviews being available for other researchers to utilize for research purposes.

When reflecting on the overall project reliability, I will argue that the study can be subject to a fair amount of criticism in its general external reliability. Meaning, that better transparency could have taken place in providing the full literature search log, and sharing the full videos of the performed inquiries. While I will strongly argue that these factors did not influence the overall project findings, I am aware that the research design is hard to replicate for others as it often is in qualitative research. The best explanations for my research choices in these areas are sensitive organizational GDPR, a pressured research timeframe, and a lack of resources as a solo researcher. It is my strong belief that the project findings are still a result of highly internally reliable research and that the project findings reflect the best of my unbiased and objectively based interpreted knowledge.

6.3 Contribution to the research field

Based on the project scope (see section 1.4) and overall project findings I will argue that this project contributes to the practical understanding of how generative AI can be implemented in marketing practices. The project provides a pragmatic, and specific understanding angle of how generative AI features can be utilized by marketers to enhance aspects of universally performed marketing tasks. I as an author hope that this paper inspires other researchers to investigate further into the usage of generative AI in research practices. While recognizing the project findings as a glimpse in time due to the rapid development of technology, I hope that the project findings outline the current benefits of utilizing generative AI in the marketing industry. While recognizing the project findings as a glimpse in time due to the rapid development of technology, I hope that the project findings outline the current benefits of utilizing generative AI in the marketing industry.



7.0 References

- Bergstrom, J. R., & Schall, A. J. (2014). Physiological response measurements. In Eye tracking in user experience design (pp. 81-106). Elsevier Science.
- Bergstrom, J. R., & Schall, A. J. (2014). Usability testing. In Eye tracking in user experience design (pp. 49-77). Elsevier Science.
- Biswas, S. S. (2023). Role of chat gpt in public health. *Annals of Biomedical Engineering*, 1-2
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Brinkmann, S. (2016). Philosophy of science: From justifying knowledge to working with ideas. In S. Brinkmann, *Philosophy of Qualitative Research* (pp. 21-37). SAGE Publications. ISBN: 9781446282650
- Brinkmann, S., & Tanggaard, L. (2010). Toward an Epistemology of the Hand. *Studies in Philosophy and Education*, 29 (3)
- Booth, Wayne C.. (2016) Introductions and conclusions. In *Craft of Research* (3rd Edition) (pp. 251-289). University of Chicago Press.
- Bryman, A. (2012). Planing a research project and formulating research questions. *Social Research Methods* (pp. 79-97). Oxford University Press (4). ISBN: 9780199588053
- Bryman, A. (2012). Ethnography and participant observation. *Social Research Methods* (pp. 430-467). Oxford University Press (4). ISBN: 9780199588053



Bryman, A. (2012). Focus groups. In *Social Research Methods* (4th ed., pp. 500-524). Oxford University Press. ISBN: 9780199588053.

Bryman, A. (2012). Getting started: reviewing the literature. *Social Research Methods* (pp. 97-128). Oxford University Press (4). ISBN: 9780199588053

Bryman, A. (2012). Interviewing in qualitative research. In *Social Research Methods* (4th ed., pp. 465-499). Oxford University Press. ISBN: 9780199588053.

Bryman, A. (2012). Qualitative data analysis. *Social Research Methods* (pp. 564-589). Oxford University Press (4). ISBN: 9780199588053

Bryman, A. (2012). Ethics and politics in social research. In *Social Research Methods* (4th ed., pp. 129-157). Oxford University Press. ISBN: 9780199588053.

Bryman, A. (2012). Research designs. In *Social Research Methods* (4th ed., pp. 44-78). Oxford University Press. ISBN: 9780199588053.

Bryman, A. (2012). Sampling. In *Social Research Methods* (4th ed., pp. 108-208). Oxford University Press. ISBN: 9780199588053.

Bryman, A. (2012). Structured interviewing. In *Social Research Methods* (4th ed., pp. 208-230). Oxford University Press. ISBN: 9780199588053.

Bryman, A. (2012). Language in qualitative research. In *Social Research Methods* (4th ed., pp. 521-540). Oxford University Press. ISBN: 9780199588053.

Bryman, A. (2012). Computer assisted data analysis: using NVivo. In *Social Research Methods* (4th ed., pp. 5490-509). Oxford University Press. ISBN: 9780199588053.



Bryman, A. (2012). Breaking down the quantitative/qualitative divide. In *Social Research Methods* (4th ed., pp. 611-625). Oxford University Press. ISBN: 9780199588053.

Bryman, A. (2012). Writing up social research. In *Social Research Methods* (4th ed., pp. 683-718). Oxford University Press. ISBN: 9780199588053.

Bryman, A. (2012). Documents as sources of data. In *Social Research Methods* (4th ed., pp. 542-562). Oxford University Press. ISBN: 9780199588053.

Bryman, A. (2012). Sampling in qualitative research. *Social Research Methods* (pp. 415-429). Oxford University Press (4). ISBN: 9780199588053

Bryman, A. (2012). Social research strategies. *Social Research Methods* (pp. 18-43). Oxford University Press (4). ISBN: 9780199588053

Bryman, A. (2012). The nature of qualitative research. *Social Research Methods* (pp. 379-414). Oxford University Press (4). ISBN: 9780199588053

Bryman, A. (2012). The nature of quantitative research. *Social Research Methods* (pp. 157-182). Oxford University Press (4). ISBN: 9780199588053

Cooper, H. M. (1988). Organizing knowledge syntheses: A taxonomy of literature reviews. *Knowledge in Society*, 1(1), 104–126.

Cronin, P., Ryan, F., & Coughlan, M. (2008). Undertaking a literature review: a step-by-step approach. *British journal of nursing*, 17(1), 38-43.

Dimitrieska, S., Stankovska, A., & Efremova, T. (2018). Artificial intelligence and marketing. *Entrepreneurship*, 6(2), 298-304



Dix et al. (2004). Socio-Organizational Issues and Stakeholder Requirements”, chap. 13 in Human Computer Interaction. Prentice Hall, p. 450-474.

Goodman, E., Kuniavsky, M., & Moed, A. (2012). Usability Testing. In E. Goodman, M. Kuniavsky, & A. Moed (Eds.), *Observing the User Experience: A Practitioner’s Guide to User Research* (2nd ed., pp. 273-326). Morgan Kaufmann.

Goodman, E., Kuniavsky, M., & Moed, A. (2012). Research into Action: Representing Insights as Deliverable. In E. Goodman, M. Kuniavsky, & A. Moed (Eds.), *Observing the User Experience: A Practitioner’s Guide to User Research* (2nd ed., pp. 479-530). Morgan Kaufmann.

Grubbe, L., Lund, L., Madsen., H., Rosenfeldt I., Mølgaard, M., d’Apuzzo, M., (2022). SEO-Bogen.

Holtzblatt, K., & Beyer, H. (2014). Contextual Inquiry in Practice. In *Contextual Design: Evolved* (pp. 67-78). Synthesis Lectures on Human-Centered Informatics, 7(4).

Holtzblatt, K., & Beyer, H. (2014). Gathering Customer Data. In *Contextual Design: Evolved* (pp. 29-39). Synthesis Lectures on Human-Centered Informatics, 7(4).

Holtzblatt, K., & Beyer, H. (2014). Introduction. In *Contextual Design: Evolved* (pp. 1-26). Synthesis Lectures on Human-Centered Informatics, 7(4).

Holtzblatt, K., & Beyer, H. (2014). Principles of Contextual Inquiry. In *Contextual Design: Evolved* (pp. 41-66). Synthesis Lectures on Human-Centered Informatics, 7(4).



Holtzblatt, K., & Jones, S. (1993). Contextual Inquiry: A Participatory Technique for System Design. In D. Schuler & A. Namioka (Eds.), *Participatory Design: Principles and Practices* (pp. 178-210). Lawrence Erlbaum Associates, Inc.

Kvale, S., & Brinkmann, S. (2008). Characterizing Qualitative Research Interviews. *InterViews: Learning the Craft of Qualitative Research Interviewing* (2nd edition, pp. 25-54). Los Angeles: SAGE Publications, Inc.

Kvale, S., & Brinkmann, S. (2008). *InterViews: Learning the Craft of Qualitative Research Interviewing* (2nd edition). Los Angeles: SAGE Publications, Inc., p. 25-119.

Kvale, S., & Brinkmann, S. (2008). Introduction to Interview Research. In *InterViews: Learning the Craft of Qualitative Research Interviewing* (2nd edition, pp. 3-24). Los Angeles: SAGE Publications, Inc.

Kvale, S., & Brinkmann, S. (2008). The Qualitative Research Interview as Context. In *InterViews: Learning the Craft of Qualitative Research Interviewing* (2nd edition, pp. 103-122). Los Angeles: SAGE Publications, Inc.

Lazar, J., Feng, J. H., & Hochheiser, H. (2017). Chapter 1 - Introduction to HCI research. In J. Lazar, J. H. Feng & H. Hochheiser (Eds.), *Research Methods in Human Computer Interaction* (Second Edition) (pp. 1-24).

Lazar, J., Feng, J. H., & Hochheiser, H. (2017). Chapter 11 - Analyzing qualitative data. In J. Lazar, J. H. Feng & H. Hochheiser (Eds.), *Research Methods in Human Computer Interaction* (Second Edition) (pp. 299-327).

Lazar, J., Feng, J. H., & Hochheiser, H. (2017). Chapter 8 - Interviews and focus groups. In J. Lazar, J. H. Feng & H. Hochheiser (Eds.), *Research Methods in Human Computer Interaction* (Second Edition) (pp. 187-228).



Lazar, J., Feng, J.H. & Hochheiser, H. (2017). Chapter 15: Working with human subjects. In Research methods in human-computer interaction. Morgan Kaufmann, NJ: Wiley, p. 455-491.

Lazar, J., Feng, J.H. & Hochheiser, H. (2017). Chapter 13: Measuring the human. In Research methods in human-computer interaction. Morgan Kaufmann, p. 369-409.

Lazar, J., Feng, J.H. & Hochheiser, H. (2017). Chapter 2: Experimental research. In Research methods in human-computer interaction. Morgan Kaufmann, p. 19-37.

Lazar, J., Feng, J.H. & Hochheiser, H. (2017). Chapter 3: Experimental design. In Research methods in human-computer interaction. Morgan Kaufmann

Lazar, J., Feng, J.H. & Hochheiser, H. (2017). Chapter 7: Case studies. In Research methods in human-computer interaction. Morgan Kaufmann, p. 153-185.

Lazar, J., Feng, J.H. & Hochheiser, H. (2017). Chapter 9: Ethnography. In Research methods in human-computer interaction. Morgan Kaufmann, p. 229-261.

Lucci, S., Kopec, D., & Musa, S. M. (2022). Chapter 1 Overview of Artificial Intelligence. In Artificial intelligence in the 21st century. Mercury learning and information (pp. 1-43).

Lucci, S., Kopec, D., & Musa, S. M. (2022). Chapter 5 Logic in Artificial Intelligence. In Artificial intelligence in the 21st century. Mercury learning and information (pp.137-157).

Lucci, S., Kopec, D., & Musa, S. M. (2022). Chapter 8 Uncertainty in AI. In Artificial intelligence in the 21st century. Mercury learning and information (pp. 239-257).

Lucci, S., Kopec, D., & Musa, S. M. (2022). Chapter 10 Machine Learning :Part I Inductive Learning with Decision Trees. In Artificial intelligence in the 21st century. Mercury learning and information (pp. 297-312).



Lucci, S., Kopec, D., & Musa, S. M. (2022). Chapter 11 Machine Learning : Part II Neural Networks. In Artificial intelligence in the 21st century. Mercury learning and information (pp. 313-368).

Marcus, G., Davis, E., & Aaronson, S. (2022). A very preliminary analysis of dall-e 2. arXiv preprint arXiv:2204.13807.

Mariani, M. M., Perez-Vega, R., & Wirtz, J. (2022). AI in marketing, consumer research and psychology: A systematic literature review and research agenda. *Psychology & Marketing*, 39(4), 755-776.

Morgan, D. L. (1996). An introduction to focus groups. *Focus Groups as Qualitative Research* (pp. 1-12). SAGE Publications. ISBN: 9780803958195

Muller, M., Chilton, L. B., Kantosalo, A., Martin, C. P., & Walsh, G. (2022, April). GenAICHI: Generative AI and HCI. In *CHI Conference on Human Factors in Computing Systems Extended Abstracts* (pp. 1-7).

Olsen, P.B. og K. Pedersen (2015). Problemorientet projektarbejde. In *Problemorienteret Projektarbejde*, (pp. 13-50).

Paschen, J., Kietzmann, J., & Kietzmann, T. C. (2019). Artificial intelligence (AI) and its implications for market knowledge in B2B marketing. *Journal of business & industrial marketing*.

Priya, A. (2021). Case study methodology of qualitative research: Key attributes and navigating the conundrums in its application. *Sociological Bulletin*, 70(1), 94-110.

Raven, M.E., & Flanders, A. (1996). Using contextual inquiry to learn about your audiences. *ASTR*.

Schmeer, K. (2000). Stakeholder Analysis Guidelines. In: *Policy Toolkit for Strengthening Health Sector Reform, LAC-HSR*.



Stone, M., Aravopoulou, E., Ekinci, Y., Evans, G., Hobbs, M., Labib, A., ... & Machtynger, L. (2020). Artificial intelligence (AI) in strategic marketing decision-making: a research agenda. *The Bottom Line*, 33(2), 183-200.

Surameery, N. M. S., & Shakor, M. Y. (2023). Use chat gpt to solve programming bugs. *International Journal of Information Technology & Computer Engineering (IJITC)* ISSN: 2455-5290, 3(01), 17-22.

Teddlie, C. & Tashakkori, A. (2006). A General Typology of Research Designs Featuring Mixed Methods. *Research in the Schools*, 13(1), p. 12-28.

Vlačić, B., Corbo, L., e Silva, S. C., & Dabić, M. (2021). The evolving role of artificial intelligence in marketing: A review and research agenda. *Journal of Business Research*, 128, 187-203.

Wang, P. (2008, March). What Do You Mean by" AI"?. In *AGI* (Vol. 171, pp. 362-373).

Webb, N. & Renshaw, T. (2008). Eyetracking in HCI. In: P. Cains & A. L. Cox (Eds.), *Research methods for human-computer interaction* (p. 35-69). Cambridge, UK: Cambridge University Press.

Zhou, K. Q., & Nabus, H. (2023). The Ethical Implications of DALL-E: Opportunities and Challenges. *Mesopotamian Journal of Computer Science*, 2023, 17-23.

