





# MARKETING STUDENTS' PERCEPTIONS TOWARDS ChatGPT: AN AI-ASSISTED THEMATIC ANALYSIS

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## ABSTRACT

Artificial intelligence tools such as ChatGPT have emerged as a disruptive force in higher education. Stakeholders are debating the integration and relevance of AI in education to improve student learning outcomes. Further investigation is needed to determine not only the pedagogical impact but also address issues such as ethics, bias, and privacy, which may act as barriers to the institutional adoption of AI tools. The purpose of this study was to explore student perceptions toward ChatGPT, including its benefits, challenges, and applications when used in college courses. This study addresses a gap in understanding generative AI's role in education from a student perspective, which can help educators develop effective plans for implementation in academic settings. Inductive thematic analysis was used as a qualitative methodology for analyzing the data, which was conducted partly by using Large Language Models. The findings of this study showed a complex interplay between AI technology, policy, values, and student outcomes that have implications for research and practice. Recommendations are provided to help Marketing educators use AI tools to improve students' learning outcomes and skills related to AI literacy.

## Introduction

ChatGPT (Generative Pre-Trained Transformer) was first made available to the public in November 2022. In the first two months, ChatGPT attracted 100 million active users, making it the fastest-growing consumer application in history (OpenAI, 2023). ChatGPT and other Large Language Models (LLMs) fall under the broad category of Natural Language Process (NLP) within the field of Artificial Intelligence (AI). These AI tools have found a place in higher education to facilitate teaching and learning (Baidoo-Anu & Ansah, 2023). Since AI tools can incorporate various multimedia formats, students can engage with content based on their preferred modalities (Dwivedi et al., 2023). Examples of AI applications include personalized learning, intelligent tutoring systems, content creation, adaptive assessment, predictive analysis, and language learning (Huang et al., 2023).

Further research is needed to understand the role, impact, and risks of AI use in educational settings, which will allow faculty and students to effectively utilize AI technology in the classroom (Dingus & Black, 2021; Guha et al., 2023; Gulati et al., 2024). Technology adoption involving various stakeholders must include a comprehensive assessment of needs, perspectives, and potential impacts across different user groups (Smuts

et al., 2017). Multiple stakeholders, including educators, administrators, and students, can play a pivotal role in shaping the adoption of ChatGPT and other AI tools in education (Elhajjar et al., 2021). Before AI technology is deployed at an institutional level, it is essential to consider stakeholders' viewpoints that can impact learning experiences. While most research studies have focused on the use of AI tools in education from a faculty, administrative, or policy perspective (Allam et al., 2023; Bearman et al., 2023), Jeon and Lee (2023) also call for examining the use of ChatGPT from students' perspectives, including analyzing students' motivation to use AI tools. By getting qualitative insights about students' dispositions and perceptions toward AI tools, educators can better understand pedagogical design and adoption of AI tools to align with students' needs and preferences, ensuring greater acceptance and engagement (Robayo-Pinzon et al., 2023).

The purpose of this study was to investigate student perceptions and attitudes toward ChatGPT, its advantages, limitations, previous use, and use of ChatGPT in college-level courses. ChatGPT was selected over other LLMs because it was the most popular chatbot when the study was conducted. Utilizing a single tool would offer standardized user experience and provide consistency in responses based on the platform. By exploring the

perceived benefits, drawbacks, prior interactions, utilization, and modes of engagement, this study explored diverse students' perspectives on AI use. The result could also help administrators make strategic decisions about using ChatGPT and other AI tools at an institutional level. Since the use of AI chatbots in education is a new area, qualitative methods, which have been shown to develop initial understanding in a less explored area (Creswell & Poth, 2016) were used for this study. The qualitative methodology used in this study for data analysis diverges from conventional approaches as it uses large language models instead of traditional qualitative software to analyze the data. Justification and rationale for the use of this innovative approach are provided in the Methodology section. The implementation of AI technology in marketing education based on students' needs and industry expectations can enhance learning outcomes and help develop critical AI literacy skills that would be important in the workplace.

In the following sections, the characteristics of ChatGPT that make it valuable and relevant in education are discussed in the review of the literature section. Challenges of ChatGPT use in education, such as ethics and transparency, are also explored. Research questions, methodology, and rationale for using LLM tools for qualitative data analysis are presented. The results are discussed, leading to the presentation of implications for practice. Limitations of the study and recommendations for further research are presented in the final section of the paper.

## Review of Literature

The use of AI in education has been debated since its introduction as ChatGPT in November 2022. ChatGPT can significantly enhance the learning experience by providing instant access to information and clarification on complex topics (Baidoo-Anu & Ansah, 2023; Firat, 2023). GenAI tools offer personalized learning opportunities, enhancing teaching and learning (Cardona et al., 2023). Relevant prompts enable ChatGPT to generate diverse examples and explanations, reinforcing concepts and promoting critical thinking (Kantor, 2024). Wang et al. (2023) state that integrating ChatGPT in higher education augments learning and cultivates a dynamic environment complementing traditional teaching methods. These tools prepare students for the modern workforce, where familiarity with GenAI technology is essential. Careful implementation with clear guidelines for responsible usage is necessary for proper integration within educational contexts.

Despite ChatGPT's popularity, limited research exists on how university students perceive and utilize

it for academic purposes (Southworth et al., 2023). Preliminary studies show marketing students find AI useful for initial research, solving basic problems, debugging code, and checking grammar, but students are unsure if it creates an unfair advantage (Gulati et al., 2024). Limna et al. (2023) noted similar positive perceptions but concerns about accuracy and loss of personal interaction with instructors. Strzelecki (2023) found students comfortable with AI adoption, though results are preliminary due to AI in education's newness.

This study addresses research gaps by exploring marketing students' perspectives on AI's relevance, adoption, application, pedagogy, and challenges in education. Understanding student interaction with AI tools is crucial for effective integration into educational settings (Jeon & Lee, 2023). Research must better understand factors shaping students' attitudes, perceptions of usefulness, and challenges (Dempere et al., 2023). Addressing this gap can clarify the most effective AI integration methods, enhancing student learning and achievement (Caratiquit & Caratiquit, 2023; Southworth et al., 2023). Balancing AI integration with traditional methods, continuous monitoring, and ethical considerations is essential in higher education (Denecke et al., 2023).

## Ethical Considerations

Integrating GenAI into education requires careful examination of ethical considerations (Cotton et al., 2023). Academic integrity and plagiarism issues have been common in higher education, exacerbated by technology enabling easy copy/pasting (Wagholikar et al., 2023). GenAI systems can fabricate facts and sources, generating text that appears authentic (Alkaissi & McFarlane, 2023). The rapid evolution of these tools necessitates reevaluating academic integrity policies to address potential misuse. Dependence on unreliable data sources could impede students' ability to discern valid information, hindering critical thinking and research skills. Perkins (2023) calls for updated academic integrity policies when using AI in courses.

Privacy and data security concerns arise when GenAI is used in education. GenAI systems process vast amounts of sensitive data, raising worries about storage, access, and potential misuse (Hasanein & Sobaih, 2023). Risks of unauthorized access or breaches threaten privacy and data security (Kahila et al., 2023). Fairness and bias in AI algorithms also pose significant ethical dilemmas. AI systems may inadvertently perpetuate or amplify inequalities by favoring specific demographics or providing unequal learning opportunities (Trust et al., 2023). Without thoughtful implementation,

GenAI systems can influence or limit individual autonomy and diversity of thought (Kizilcec & Davis, 2023). Ethical responsibility in using AI must ensure transparency and accountability in the learning process.

### Research Problem

The focus of this study was on student perceptions of AI use in college courses. Since GenAI technology, in its current format of natural language processing, has become mainstream and gained acceptance in higher education, research is needed to capture issues that will affect students when institutions integrate GenAI tools into courses. This study aims to fill a gap and contribute new knowledge to the field by identifying and discussing themes related to students' perceptions of ChatGPT.

The following research questions were addressed in this study:

**RQ1:** How do students perceive the benefits of instructors allowing the use of ChatGPT in college courses?

**RQ2:** What drawbacks do students perceive if instructors allow the use of ChatGPT in college courses?

**RQ3:** What are the different ways in which students plan to use ChatGPT if permitted?

### Theoretical Framework

The theoretical lens used in this study was the Social Cognitive Theory (SCT) first proposed by Bandura (1986), who identified the role of observational learning, self-efficacy, and outcome expectations in shaping human behavior. SCT provided a relevant framework for understanding the dynamics involved in the integration of ChatGPT into educational contexts from the perspective of college students. By focusing on the interplay between environmental influences (use of ChatGPT and learning outcomes), cognitive processes (Engagement/self-efficacy), and behavioral patterns (reinforcement/self-regulation), SCT offered valuable insights into how students perceive the benefits and drawbacks of such technology, as well as its impact on their learning experiences.

Although various factors can impact human attitudes, behaviors, and perspectives (Rakover, 1997), SCT was used as the dominant theoretical framework for understanding students' perspectives on the use of ChatGPT. This is because SCT provides a comprehensive approach to human learning and behavior. The use of ChatGPT

environment involves an interaction between personal factors, behavior, and environmental influences, which is aligned with how students use AI tools in educational settings. SCT's focus on self-efficacy, observational learning, and reciprocal determinism in technology-enhanced environments (Devi et al., 2017) makes it relevant for examining student perceptions of AI tools.

AI chatbots have been examined using the lens of technology acceptance by studying their impact on user behavior in a conversational format. ChatGPT use by students aligns with the technology acceptance model that looks at the perceived ease of use and perceived usefulness as key factors influencing technology adoption (Shahzad et al., 2024). Since ChatGPT can provide personalized feedback for an individualized learning experience, it can engage students and improve their academic performance. The vast knowledge base of AI chatbots, along with their user-friendly interface, has been shown to contribute to a positive user experience, further encouraging students to integrate this AI tool into their learning processes (Abbas et al., 2024). As educators become more familiar with AI chatbots and better understand how AI tools can play a role in instruction and assessment, there is projected to be a significant shift toward AI-driven education (Baidoo-Anu & Ansah, 2023). Therefore, by using the SCT theoretical framework, this study examines students' perceptions of AI technology in education. The results can provide a grounded approach that can help marketing educators understand the role of AI in teaching.

For RQ1, SCT suggested that students' perceptions of the benefits of instructors using ChatGPT in college courses may be influenced by their self-efficacy beliefs regarding their ability to use and leverage the AI tool effectively. Additionally, the environmental factor of instructors' use of ChatGPT may shape students' perceptions and subsequent behavior (Bandura, 1986). For RQ2, SCT posited that students' perceptions of the drawbacks of instructors using ChatGPT in college courses may stem from personal factors, such as their beliefs about the potential risks or limitations of AI tools in education. Furthermore, the environmental influence of instructors' use of ChatGPT may interact with students' personal factors to shape their perceived drawbacks (Bandura, 2001). For RQ3, SCT suggested that students' planned use of ChatGPT, if permitted, and their perceptions of its impact on their learning experience may be influenced by their self-efficacy beliefs and personal factors, such as their confidence in using AI tools effectively. Additionally, the environmental factor of allowing or prohibiting the use of ChatGPT in educational settings may interact with students' personal factors and behavior (Bandura, 1986).

## Methodology

### Research Design

Data was collected from participants enrolled in two Marketing courses over the Summer, Spring, and Fall semesters. The university Institutional Review Board (IRB) granted approval for the study (#24-068), confirming that all protocols adhered to the ethical guidelines for research involving human subjects and informed consent procedures. A pilot study was conducted using a small group of students (not part of the sample) to seek feedback on the wording and clarity of the questions in the survey and identify any potential issues. Based on the results from initial testing, minor changes were made before the survey was administered to the respondents. The survey asked the following questions: 1) Have you used ChatGPT before this course?; 2) List three benefits of instructors allowing ChatGPT to be used in courses; 3) List three drawbacks of instructors allowing ChatGPT to be used in courses; 4) List three ways in which you plan to use ChatGPT if it is allowed; 5) In your opinion, should ChatGPT be allowed in all courses for completing assignments and exams? 6) Optional Comments.

A purposive non-probability sampling was used to collect data via an online survey on the Qualtrics platform after students completed AI-assisted assignments. One hundred sixteen juniors and seniors at a southeastern AACSB-accredited university in the USA completed the survey as part of the course. Purposive sampling ensured participants had the same experience using ChatGPT in Marketing Research and Business Web Design courses. Marketing researchers stress the need to keep the curriculum current in an era of digital disruption (Crittenden & Peterson, 2019). Individual assignments required students to use ChatGPT. The instructor demonstrated using ChatGPT for idea generation, brainstorming, summarization, extraction, classification, and knowledge seeking. Information about prompt frameworks was provided for formulating structured queries to get relevant responses from ChatGPT. Assignments required students to examine ChatGPT's output as a starting point, include a list of prompts used, and compare their prompts with others. Social constructivism theory emphasizes the importance of social interaction in learning. Learning is enhanced when individuals construct knowledge through interactions (Vygotsky, 1978).

After generating ChatGPT output, students were instructed to engage in additional research using Google Scholar and research databases from the university library to expand on ChatGPT's information. This

approach ensured assignments were not mere copy-and-paste exercises but opportunities for deeper investigation. Higher-order learning was demonstrated by assessing the accuracy, relevance, and the ability to analyze and articulate arguments based on research findings (Mao et al., 2024). Following the use of ChatGPT and traditional research sources, the survey asked about previous ChatGPT use, perceptions of its benefits and drawbacks, future use in courses, and whether it should be allowed in assignments and exams. Students were encouraged to include open-ended comments. A series of open-ended questions on ChatGPT perceptions were presented to capture a diversity of perspectives. Responses were analyzed using qualitative methodology. Analysis was conducted using inductive thematic analysis to identify patterns within qualitative data from students. Thematic analysis is useful for open-ended textual data (Braun & Clarke, 2022; Terry et al., 2017). Braun et al. (2021) provided evidence that surveys with open-ended questions can be used for qualitative analysis. Survey questions can assess participants' subjective experiences, narratives, practices, positioning, and discourses (Braun & Clarke, 2013). Researchers (Pitura, 2023; Safdar et al., 2016) support the use of open-ended questions in surveys for qualitative research, comparable to interviews and case studies.

### Procedures for Data Analysis

There are many approaches to analyzing qualitative data, such as case studies, descriptive methods, ethnography, and phenomenology. For this study, inductive thematic analysis was used based on recommendations from Çelik et al. (2020) and Kalpokas and Radivojevic (2022). This analysis offers flexibility to explore diverse aspects of data, separate data into manageable units for analysis, identify recurring patterns and themes, and explore contextual nuances. Thematic analysis helps identify common issues that recur, summarizing participants' views (Lawless & Chen, 2019). A unique aspect of this study is the use of AI-based LLM models instead of conventional software (such as NVivo or Atlas.ti). OpenAI's ChatGPT and Google Gemini LLMs were used as they were popular tools when the study was conducted. LLMs present new alternatives for qualitative analysis (Kantor, 2024). Generative AI for marketing research has been previously explored (Schmitt, 2024), and it has been found that LLMs can automate repetitive tasks, reducing time and effort (Jeon & Lee, 2023). The researchers demonstrated how social media posts can be analyzed to extract meaning and uncover hidden patterns. Additionally, LLMs can offer fresh perspectives and generate unexpected insights (Rillig



et al., 2023). Oversight was provided to minimize errors of reliability and integrity due to AI-generated hallucinations (Alkaissi & McFarlane, 2023).

LLMs can identify and extract themes from textual data for thematic analysis. Their parsing capabilities and iterative coding enable them to sift through large datasets to identify patterns and themes (Pearse, 2019). LLMs use natural language processing techniques to organize textual data and codes for theme identification and analysis (Lawless & Chen, 2019). This provides efficient thematic analysis, uncovering latent themes. However, LLMs also present challenges such as hallucinations, errors, bias amplification, and skill atrophy (Kantor, 2024). By complementing LLM output with human intuition and expertise, qualitative researchers can derive meaningful insights (Burtsev et al., 2023).

ChatGPT Plus (GPT-4) Advanced Data Analysis module and Google Gemini LLM were used to perform the thematic analysis. The Excel (CSV) dataset containing a transcript of participant responses was uploaded to the LLMs. The analysis aimed to use LLMs to extract codes from which themes could be built. Coding data identifies patterns that may require further investigation (Williams & Moser, 2019). Based on the codes, themes were developed by grouping shared concepts and patterns. Various theme identification techniques exist in qualitative research (Braun & Clarke, 2021), from quick word counts to analysis of linguistic features and physical text manipulation. Machine language techniques can also be used (Jayady & Antong, 2021). The prompt framework used in this study for the ChatGPT and Gemini LLMs is shown in Table A1. While LLMs effectively generated codes, evaluating the proposed themes was less satisfactory. The use of two LLMs showed a lack of consensus in theme development and inability to synthesize coherent themes. This divergence may be due to differences in algorithms, training data, and interpretative mechanisms (Bano et al., 2024).

Thematic Data analysis was initially done by using two LLMs. Since the theme results generated by the LLMs were not consistent, a manual thematic process done by two raters was used to capture nuances that the AI analysis may have missed. Golafshani (2003) stated that reliability and validity in qualitative studies should use a naturalistic approach like triangulation. To establish reliability and validity, a manual refinement process was used to reconcile discrepancies and ensure cohesive themes from participant responses and LLM-generated output. Two faculty members examined the transcripts for consistency. Cohen's Kappa analysis was conducted to assess the inter-rater reliability between the two faculty members' coding of data. The results indicated a high level of agreement between the two raters, with

a Kappa value of  $\kappa = 0.82$ , 95% CI [0.75, 0.89]. According to Landis and Koch (1977), this Kappa value suggests a strong agreement between the raters. This multimodal triangulation approach for naturalistic interpretive studies (Creswell & Miller, 2000) facilitated a deeper understanding of data beyond what AI processes alone could capture. The triangulation process enhanced the trustworthiness of emergent themes by combining AI-output with human analysis to provide a more reliable interpretation of the data. The synthesis of technology and human analytical capabilities provided a credible set of themes and nuanced interpretations. This process demonstrated the current limitations of LLMs in fully replicating the depth of human qualitative analysis (Tai et al., 2024).

## Results

Out of 116 participants, 40% had previously used ChatGPT, and 60% indicated this was the first time they had used ChatGPT. When asked if ChatGPT should be allowed in other college courses for assignments or exams, 75% indicated it should be allowed.

### ***RQ1: How Do Students Perceive the Benefits of Instructors Allowing the Use of ChatGPT in College Courses?***

Table 1 shows the codes generated by ChatGPT Plus and Google Gemini based on participant responses to the question on the perceived benefits of ChatGPT use in courses. It was observed that ChatGPT Plus was able to extract more codes than Gemini, which categorized many codes under the "Other" category. For ChatGPT Plus, the highest frequency was related to the support ChatGPT would be able to provide to facilitate learning. Other features mentioned by participants in the survey that were repeated were research assistance, creativity and idea generation, time management, and writing/grammar improvement. Similarly, Gemini assigned the highest frequency code to learning, research, and writing improvement. Some participants noted the benefits of ChatGPT to include real-world preparation, diverse perspectives, and engagement and feedback offered by ChatGPT when used as a tool for completing assignments.

The next step was to generate themes based on the codes identified by the two LLMs. Characteristics of good themes include relevance, coherence, distinctiveness, richness, depth, consistency, and interpretability (Ritchie & Spencer, 2002; Wood et al., 2020). Both LLMs were able to generate a list of themes but could not sufficiently demonstrate the interpretive richness of

**Table 1.** Codes generated by ChatGPT Plus & Gemini.

ChatGPT Plus		Google Gemini	
Code	Participant Frequency	Code	Participant Frequency
Diverse Perspectives	2	Feedback	4
Real-World Preparation	2	Engagement	4
Interactive Learning	3	New Perspective	7
Personalized Assistance	4	Creativity	8
Study & Revision Aid	10	Efficiency	9
Technological Familiarity	10	Accessibility	9
Accessibility & Convenience	13	Writing	10
Writing & Grammar Improvement	15	Research	11
Time Efficiency	17	Learning	22
Creativity & Idea Generation	21	Other	36
Research Assistance	21		
Enhanced Learning	30		
Support for Overwhelmed Students	59		

**Table 2.** Theme generation for RQ1.

Theme	Description	Source Codes
Educational Enhancement	Enrichment of the learning experience aimed at optimizing student understanding, engagement, and achievement.	Enhanced Learning, Engagement, Personalized Assistance, Study Aid, Creativity, Research assistance and support, Feedback
Efficiency & Accessibility	Maximizing access to information as well as support and opportunities.	Personalized assistance, Accessibility and convenience, Time saving.
Innovative Learning Approaches	Being aware of novel strategies, critical thinking, and active engagement with resources.	Diverse perspective, Interactive learning, Idea generation, New perspectives.
Skill Development	Refinement and cultivation of abilities, competencies, and proficiencies through instruction, feedback and practice.	Technology Familiarity, Writing and Grammar improvement,

their thematic analysis, which is a crucial element when generating themes from codes (Braun & Clarke, 2013). To better capture the contextual understanding of the responses, manual interpretation was used to identify subtle nuances within the transcript of student responses.

Based on the codes given in Table 1, the researchers manually identified themes shown in Table 2. The theme, description, and codes associated with each theme's development are listed in the table.

Participants' responses to questions asked in the survey varied from brief to lengthy, which presented diverse evidence of engagement and attitude toward ChatGPT use in education. Table 3 provides unedited representative sample quotes under each theme, which grounds the study's findings in the real-world perspective of participants. The quotes are presented in their original form to preserve participants' authentic expression. Braun and Clarke (2013) emphasize the need for

**Table 3.** Sample quotes for RQ1 themes.

RQ1 Themes	Representative Quotes
Educational Enhancement	<ul style="list-style-type: none"> <li>• P5: ChatGPT can give insight just like a journal article would. It allowed me to ask specific questions and cut down the time for having to search and scan for an article.</li> <li>• P82: It can provide information needed for the course. I found it easily accessible and easy to use. It introduces an area of AI that most students would never use before being introduced to it.</li> </ul>
Efficiency & Accessibility	<ul style="list-style-type: none"> <li>• P19: One benefit that ChatGPT has is that it saves times for students who are very overwhelmed with work. It is very often available, which can be convenient if other resources are not available. It can give another look into a subject that a student might not have by using other resources.</li> <li>• P33: Creates a "spark" of creativity for students at a wall or with ADHD, Instructors don't even teach anyways most of the time so why not It can give students a better understanding or better way to explain something.</li> <li>• P109: Saves time researching. ChatGPT can help you study by feeding it study guides and quizzing and asking it to. Can also be used to summarize your essays, give opinions, and other feedback if requested.</li> </ul>
Innovative Learning Approaches	<ul style="list-style-type: none"> <li>• P40: Great way for cross-referencing data and explaining hard-to-understand subjects, Can help generate different ways of seeing something if someone is stuck. Can help people write better by seeing how AI would write something.</li> <li>• P102: We have more access to content that we might otherwise have to do a lot of data mining to retrieve, We have deeper understanding of the functionality of technology because I'm not a tech-savvy person it's hard for me to figure programs like that out, Lastly, it can help with real-world knowledge we can use for our careers.</li> </ul>
Skill Development	<ul style="list-style-type: none"> <li>• P9: The information is broken down in a clear, concise manner. This helps users digest the information they are looking for quickly and apply it correctly. It can help organize your thoughts clearly in your writing. It can also assist in generating ideas for your writing too. • P89: The world is changing, AI is being used more and more. Professors teaching us how to use ChatGPT helps us adapt. ChatGPT also helps us see things from a different perspective. ChatGPT also helps creativity as it gives us content we can build off of.</li> </ul>

**Table 4.** Codes for concerns about ChatGPT use.

ChatGPT Plus		Google Gemini	
Code	Participant Frequency	Code	Participant Frequency
Laziness	2	Limited Originality	5
Lack of Critical Thinking	3	Ethical Concerns	6
Privacy and Security Concerns	4	Laziness	7
Reduced Creativity	4	Dependence on Technology	7
Lack of Originality	5	Inaccurate Information	10
Limitation of AI Understanding	6	Lack of Critical Thinking	11
Ethical Issues	9	Other	23
Inaccurate Information	10	Plagiarism	24
Potential for Misuse	13	Cheating	70
Dependency on Technology	16		
Overreliance and Diminished Learning Effort	16		
Plagiarism	19		
Risk of Academic Dishonesty	33		
Cheating	35		

authenticity in qualitative research, where understanding the complexity of human experiences and perspectives is vital to convey. The quotes presented below also enhance the credibility and reliability of findings by providing evidence for discussion and showing the direct connection between the data and researchers' interpretations (Sandelowski, 1994).

### ***RQ2: What Drawbacks Do Students Perceive if Instructors Allow the Use of ChatGPT in College Courses?***

Table 4 shows codes generated by ChatGPT Plus and Google Gemini LLMs based on participant responses to the question regarding concerns about ChatGPT use.

Both ChatGPT Plus and Gemini LLMs showed consensus in identifying cheating and plagiarism as the main concerns expressed by students regarding whether instructors would allow the use of ChatGPT in courses. Some participants noted that ChatGPT use would cause a lack of critical thinking as well as overreliance and diminished learning effort due to ChatGPT use. Students also identified inaccurate information as one downside of using ChatGPT. Other observations noted were reduced creativity, limited originality, and dependence on technology.

The manually extracted themes for RQ2 based on the codes identified by the LLMs are listed in Table 5.

Relevant unedited quotes that aligned closely with the identified themes in RQ2 are included in Table 6.

### ***RQ3: What are the Different Ways in which Students Plan to Use ChatGPT if Permitted?***

Table 7 shows codes generated by ChatGPT Plus and Google Gemini LLMs based on participant responses to the question of the use and impact of ChatGPT if its use is permitted.

ChatGPT Plus identified the highest frequency of comments associated with writing e-mails, discussion posts, and professional documents. Students also mentioned that ChatGPT could save time on assignments and research. ChatGPT could assist in writing papers and essays, generating ideas, and checking grammar. They could also use ChatGPT to study, review exams, and understand complex topics. Google Gemini noted students' comments on generating ideas for projects, assignments and overcoming writer's block, which could enhance their understanding of topics and help with exam preparation. Google Gemini extracted a higher frequency of codes associated with research assistance, study, exam preparation, and supplemental learning. Students noted that ChatGPT could be used for creativity, idea generation, and professional communication skills. It is related to codes that emphasize timesaving and efficiency in academic work.

**Table 5.** Theme generation for RQ2.

Theme	Description	Source Codes
Academic Dishonesty	Includes plagiarism and cheating	Cheating, Plagiarism
Technology Dependence	Includes Negative Learning impact	Lack of critical thinking, Reduced Creativity, limited originality
Privacy, Security, Ethics	Risks associated with privacy & ethical dilemmas	Privacy and Security concerns, Ethical issues
Information Inaccuracy	Trust issues for ChatGPT generated output	Inaccurate information



**Table 6.** Sample quotes for RQ2 themes.

RQ2 Themes	Representative Quotes
Academic Dishonesty	<ul style="list-style-type: none"> <li>• P1: If not made to read the written material, the information does not help the student. It allows the student to submit someone else's knowledge instead of their own. Allowing this can be considered a violation of the ethical code of conduct as it relates to plagiarism.</li> <li>• P9: It gives many answers for you. It almost feels like you are cheating by accessing so much relevant information at one time. It doesn't always answer your questions the same way a human can. I still think lectures and conversation may be a more beneficial means of learning. I think allowing ChatGPT in college creates too much of a shortcut or a crutch in learning for students. When they do not know the answer, they may feel inclined to search for the answer using ChatGPT rather than studying or looking for the knowledge themselves.</li> <li>• P80: ChatGPT can do all of the work for you, therefore, the student could simply copy and paste an essay and turn it in as their own. ChatGPT sometimes words things in a very specific way, including a highly complex vocabulary, that many college students do not have. ChatGPT makes college students have to work less, therefore, students apply themselves less.</li> </ul>
Technology Dependence	<ul style="list-style-type: none"> <li>• P7: The student population can become too dependent on the technology. Can create a decrease in cognitive thinking and critical thinking skills.</li> <li>• P56: Students will not be producing their own organic work in classes. Students won't be accountable with their school work.</li> <li>• P83: It could hinder the creativity and thought process of students who rely on it too heavily. It could take away credibility of degrees earned.</li> </ul>
Privacy, Security, Ethics	<ul style="list-style-type: none"> <li>• P1: If not made to read the written material, the information does not help the student. It allows the student to submit someone else's knowledge instead of their own. Allowing this can be considered a violation of the ethical code of conduct as it relates to plagiarism.</li> <li>• P19: Anytime that an online website is involved, there is a concern for a user's privacy. Users' data can be breached if the website is not safe.</li> <li>• P85: Can create an ethical grey area for plagiarism in the classroom if students decide to use it incorrectly.</li> </ul>
Information Inaccuracy	<ul style="list-style-type: none"> <li>• P5: It does not cite sources, students may use it to plagiarize, and students may not do the research required for particular assignments.</li> <li>• P32: Information is not always accurate. Lack of sources for information generated from prompts. Credibility of information prompted could be questioned.</li> <li>• P74: Some repetitive content was produced. Could be considered plagiarism. Lacks authenticity.</li> </ul>

**Table 7.** Codes for use and impact of ChatGPT.

ChatGPT Plus		Gemini	
Code	Participant Frequency	Code	Participant Frequency
Time Efficiency	8	Efficiency and Time Management	8
Study and Exam Preparation	9	Writing and Feedback	14
Creative and Idea Generation	9	Personal Growth and Problem Solving	14
Supplemental Learning	9	Creative and Professional Development	15
Feedback and Review	9	Academic Enhancement	16
Problem Solving	9		
Learning and Personal Development	9		
Research Assistance	10		
Professional Communication	16		

The following themes were manually identified and are listed in [Table 8](#), along with the descriptions and source codes associated with each theme.

Representative quotes from participants for RQ3 under each theme are presented in [Table 9](#).

## Discussion

This section discusses the significance of the findings in the context of the research questions, previous literature, and the connection to SCT theory and existing literature. In previous studies, SCT provided a useful framework for understanding factors that influence individuals' decisions to adopt and diffuse technological innovation, such as cloud computing and mobile banking (Ratten, 2011). In this study, students' perceptions of the benefits and drawbacks of ChatGPT (RQ1 and

RQ2) were linked to their self-efficacy beliefs and experiences with using ChatGPT for assignments. Higher self-efficacy would lead to a more favorable outcome and reinforce the benefit of ChatGPT in courses. The social cognitive theory refers to the principle of reciprocal determinism (Pajares & Usher, 2008), which in this study highlighted the interaction of how student perceptions (personal factors) about ChatGPT (environmental factor) can influence their choice of use and intended use for RQ3 (behavioral factors), which in turn can impact learning outcomes (environmental factor) and student perceptions of ChatGPT. Therefore, using the framework of SCT for thematic analysis of qualitative data about the adoption and student perception of ChatGPT AI in courses enhanced the theoretical grounding of the study. The SCT also contributed to a broader comprehension of how technological

**Table 8.** Theme generation for RQ3.

Themes	Description	Source Codes
Academic Development	Includes Learning & Development, writing, editing, review skills	Writing & feedback, supplemental learning
Professional Development	Creativity, develop communication skills	Problem solving, personal growth, communication
Content Creation	Critical thinking, Idea generation, analyzing arguments, evaluating information, presentation	Research assistance, idea generation
Productivity	Time saving skills, scheduling, organizing	Efficiency & Time management

innovations like ChatGPT can be optimally integrated into educational practices.

The themes of RQ1 (Educational Enhancement, Efficiency & Accessibility, Innovative Learning Approaches, and Skill Development) underscore the potential shifts in pedagogical practices enabled by AI technologies. For Educational Enhancement, students acknowledged ChatGPT's role in enriching the learning experience through improved engagement and achievement. Smith and Jones (2020) observed that AI tools can provide personalized learning experiences and support diverse learning needs. Kasneci et al. (2023) also found that AI tools can promote active learning and knowledge construction. For the Efficiency and Accessibility theme, student comments reflected an appreciation for ChatGPT's ability to provide immediate access to information, which can reduce the time and effort required to complete assignments. This aligns with studies that report AI tools can improve the efficiency of learning

processes and access to educational resources (Liu et al., 2022). It has also been noted that technology-based learning can promote learner autonomy and self-directed learning (Raeisi, 2023). For the theme of Innovative Learning Approaches, participants valued the role of ChatGPT in fostering creativity, offering new perspectives, and supporting active engagement with learning materials. Cole and DeVine (2023) and Grassini (2023) claimed that AI technologies can facilitate innovative teaching and learning strategies, promoting higher-order learning skills. For Skill Development, participants appreciated the role of ChatGPT in improving writing and research skills. Keshishi and Hack (2023) have shown the significance of AI in developing essential academic and professional skills. RQ1 findings provided insights about students' comments on the role of ChatGPT in helping with innovative learning approaches. The students saw AI not only as a tool for information retrieval but also as

**Table 9.** Sample quotes for RQ3 themes.

RQ3 Themes	Representative Quotes
Academic Development	<ul style="list-style-type: none"> <li>• P48: ChatGPT is a great tool for rough drafts - of course, each draft from ChatGPT needs to be edited and reviewed before the final draft is turned in. I will use AI software to answer uncomplicated questions when I'm in need of help. Use ChatGPT as an aid in finding specific and relevant information when needed for essays, discussion posts, etc.</li> <li>• P80: If allowed, I would use ChatGPT to help brainstorm at the beginning of my assignment, since I often struggle with where to start. If allowed, I would use ChatGPT to help me better phrase my sentences, such as if I am struggling with trying to word a complex sentence or paragraph.</li> </ul>
Professional Development	<ul style="list-style-type: none"> <li>• P15: I would use this tool for building a resume, I struggle finding the right terms and skills to represent on a professional platform and Chat GPT could help me build something unique and in my own words. This tool can be used for International Management course to easily access past trade, laws, rights, and regulations that I tend to take so long to find on a general basis. ChatGPT gives a direct answer rather than a million sites.</li> <li>• P39: If it is used as an additional resource we would still need to use journal articles and references with our information we found on ChatGPT. Hence allowing us to bridge the gap between AI and Journal articles. I would use it to help me understand certain topics further and do more research if I do not full get a clear understanding from the text book or lecturer. For ideas on topics I could do further research on.</li> </ul>
Content Creation	<ul style="list-style-type: none"> <li>• P9: I think ChatGPT is really beneficial in helping organize your thoughts during the writing process. This is the main reason I would use it in college if allowed. I would also use it as a tool to check my work, only after I have completed myself first though. It also can generate sources for you if you are looking for specific articles for research purposes. This can be incredibly helpful and shorten the research process significantly.</li> <li>• P10: Very helpful for potential blog creation assignment. Wish I would have known about this sooner as I graduate in less than 3 months unfortunately. Would recommend to other students if their professor would allow them to use it.</li> </ul>
Productivity	<ul style="list-style-type: none"> <li>• P5: I will ask it questions on topics, I can get more insight on what a professor is asking for an assignment, it will cut my time of doing full hour long research.</li> <li>• P30: I would use it so that I could get all of the information in one place. I would use it because it is a faster alternative since I work a full time job. I plan to use it for projects, papers, and other assignments.</li> <li>• P35: To save time, having specific information available so fast is incredible. For more ideas on some assignments that I seem to "hit a wall" on to give me a different perspective to finish the assignment and simply for just more information regarding a topic.</li> <li>• P38: I would use this to get a quick brainstorm of different topics to see which one interests me most and could benefit from research. I would use it to help with the format of assignments to make sure I am on the right track. I would use it for help writing emails to professors and other students in a professional manner.</li> </ul>

a resource that can be used for creative thinking and problem-solving. This finding is in contrast to a common concern that the use of AI might stifle creativity and critical thinking (Abbas et al., 2024). RQ1 findings showed that when AI tools are properly integrated into the curricula, tools such as ChatGPT can offer students new ideas and perspectives, which can enhance their overall learning experience.

RQ2 asked about challenges associated with ChatGPT use in courses. The themes that were identified (Academic Dishonesty, Technology Dependence, Privacy/Ethics, Information Inaccuracy) reflected critical considerations before integrating AI in educational settings. The main concern highlighted by students was plagiarism and cheating. Participants noted the ease of access to information provided by ChatGPT could foster a culture where academic integrity is compromised. This concern aligns with existing literature that emphasizes the importance of nurturing academic integrity within educational settings (Matthews & Volpe, 2023) and a call for the development of robust assessment strategies that go beyond traditional assignments to encourage critical thinking and analysis of information (Sabzalieva & Valentini, 2023). Participants also voiced concerns about over-reliance on ChatGPT, which would diminish students' motivation to engage deeply with course material. This could cause a potential decrease in critical thinking and organic content creation, pointing to a broader issue of technology's role in shaping learning behaviors. Abukhurma et al. (2024) have shown that dependence on AI tools can lead to a decline in students' ability to analyze information, solve problems, and think creatively. The trustworthiness of information generated by ChatGPT was another concern. The skepticism toward the reliability of AI-generated information aligns with previously noted concerns about the credibility of digital resources in academic research (Abbas et al., 2024). Student comments regarding privacy, security, and ethical dilemmas underscore the challenges inherent in the integration of AI tools in educational contexts. The findings of this study add to the ongoing discussion about the importance of establishing ethical guidelines and robust data security measures to manage the complexities presented by AI technologies in the field of education (Perkins, 2023). While ChatGPT (and other LLMs) can impact pedagogy, their incorporation into learning environments must be navigated with attention to themes identified in RQ2. Students' comments showed a simultaneous concern about academic dishonesty and a desire for high

efficiency and accessibility. Students valued the benefits of AI tools but also recognized the potential for misuse. Another insight was the relatively low emphasis on privacy and ethical concerns compared to issues of academic integrity mentioned by students. This may be because of a generational shift in attitudes toward data privacy, where consumers are more willing to give up personal data in return for benefits. There is a need for clear guidelines and ethical frameworks to be established in academic settings. The findings of this study emphasize the need for ongoing dialogue among educators, technology teams, and policymakers to evaluate the benefits of AI so it can be implemented responsibly and ethically.

RQ3 focused on how students perceive the applications of ChatGPT use if it is permitted to be used in courses. The themes that emerged (Academic Development, Professional Development, Content Creation, and Productivity) showed students considered ChatGPT as a pivotal tool for writing, research, in-depth topic exploration, and exam preparation. This aligns with previous research highlighting the potential of educational technology to foster active learning and knowledge construction (e.g., Santos & Serpa, 2020; Tan et al., 2021). For Professional Development, students saw value in using ChatGPT to build professional documents such as resumes and cover letters and to refine communication skills by using AI simulators to prepare for interviews. Leo et al. (2024) have noted this skill could enhance students' personal brand and job search behavior self-efficacy. Content creation and productivity emerged as themes that could help students brainstorm ideas, overcome writer's block, organize thoughts, and revise the phrasing of their work. Students also commented that these skills could enable them to generate quality content, streamline workflow, and enhance communication effectiveness. The findings of this research question showed that students saw ChatGPT as a collaborative tool, which has implications for how educators may be able to integrate AI tools into assignments and project work. These findings are also consistent with studies exploring the use of technology and creative experience (Beghetto, 2021) and using technology to improve productivity and time management skills (Lacka et al., 2021). An important insight from student responses to this research question was that there was little mention of developing critical thinking skills independently of AI assistance. Another key aspect missing from student responses was the importance of verifying information generated by AI

tools. While students mentioned ChatGPT as a useful tool for brainstorming, editing, and finding information quickly, it is essential for students to exercise caution and verify the accuracy of the content provided. Additionally, students should be made aware of potential biases or limitations in AI-generated content (Milovic et al., 2024). Educators should encourage students to supplement AI information with primary research sources. Critical thinking and writing skills are crucial in ensuring the quality and integrity of the students' work produced with the help of AI tools.

Overall, from students' perspectives, the themes under each of the three research questions offered a better understanding of the complexities surrounding the potential adoption of ChatGPT in college courses. The themes represented collective insights gained from student perception, which can provide a robust framework for faculty and administrators to make decisions about ChatGPT and GenAI use in courses. This research bridged the knowledge gap regarding the impact of integrating GenAI tools such as ChatGPT in college courses from students' perspectives. The findings of this study revealed that students expressed guarded enthusiasm about using ChatGPT. Taking all the research questions together, the findings of this study demonstrated a complex interplay between the use of technology, policy, educational values, and student outcomes. While ChatGPT can be a powerful tool for academic use, the findings also prompt critical reflection on the role of AI in education. Educators and policymakers have the challenging task of integrating AI tools in education to complement rather than supplant the educational experience of students.

### **Implications for Marketing Educators**

Since ChatGPT was first introduced in November 2022, many LLMs (e.g., Gemini, Copilot, Claude) have been released and are available for use today. Data for this study was collected from students' experiences with ChatGPT. Based on data collected from students about their perspectives of ChatGPT use for learning and AI-assisted thematic analysis grounded in students' experiences, the resulting themes highlighted the benefits as well as challenges of using AI in the classroom. Actionable insights that inform pedagogical strategies for marketing educators can be proposed. To serve as a guide for AI-Literacy, Hazari (2024) has provided a conceptual framework that includes three components: awareness (AI terminology, capabilities, limitations), development of skills (writing effective prompts,

research using AI, and content generation), and application of knowledge (problem-solving with AI). These components provide a structured approach for marketing educators to consider when contemplating the use of AI tools in Marketing courses. By focusing on awareness, skill development, and practical application, the use of AI tools in the classroom can prepare students to use AI in marketing roles in the workplace (Ferrell & Ferrell, 2020; Guha et al., 2023).

Ferrell and Ferrell (2020) call for revision and updates to courses in marketing education and to integrate emerging technologies such as AI. Table 10 shows examples of assignments, activities, and student outcomes that marketing educators can use in courses. The AI-based activities were generated using OpenAI (2024) prompts and mapped to the themes that had emerged from the research questions. The activities were then customized for marketing educators based on guidelines recommended by Thontirawong and Chinchanchokchai (2021), Brand et al. (2023), and Tafesse and Wood (2024). The widespread availability and deployment of AI by businesses indicates that employees will have access to AI technology in the workplace. As shown in the examples listed in Table 10, marketing educators can integrate AI tools into their courses by using activities and assignments that help develop critical thinking skills. This approach will ensure that students are not just using AI as a shortcut to complete assignments (RQ2 theme – Technology Dependence) but are developing the necessary higher-order skills to prepare them for successful careers in marketing.

Future studies can explore faculty experiences and pedagogical approaches to utilizing AI tools in courses, which can provide valuable insights for effective implementation. The identified themes highlight the potential of AI to enhance educational experiences, promote efficiency and accessibility, and encourage innovative learning approaches. Additional research could also explore reasons for AI technology's continued adoption (or abandonment) in education after the novelty factor has dissipated (Dwivedi et al., 2023). Research could also investigate the measure of disparity between anticipated benefits and realized utility.

### **Limitations**

A limitation of this study was that the responses collected were from two courses taught by the same instructor over three semesters. While the assignments were different in the two courses, it is possible that the nature of assignments and the increasing

**Table 10.** Sample AI-assisted assignments/activities and outcomes related to the workplace.

RQ	Themes	Course	Assignment/Activity	Student outcome related to Workplace
1	Educational Enhancement Efficiency & Accessibility	Marketing Research	Use AI analytics tools to process large datasets (e.g., purchase history, social media activity) and generate insights	Ability to analyze and interpret market data effectively
		Digital Marketing	Use AI for identifying high-performance keywords, automate bid management for pay-per-click campaigns	Efficiently manage cost-effective search engine marketing campaigns
	Innovative Learning Skill Development	Social Media Strategy	Compare/contrast innovative social media marketing campaigns generated by AI	Ability to develop impactful and engaging social media campaigns
2	Academic Integrity	Professional Selling	Practice with AI virtual sales assistants and run negotiation simulations	Improve sales and negotiation skills
		Marketing Communications	Use AI plagiarism tools to analyze competitors' brand messaging and ensure originality in brand position strategies	Develop awareness of research integrity and ethical marketing practices
	Technology Dependence	Strategic Marketing Management	Develop analog marketing campaigns and justify the benefit of the analog method over campaigns developed using AI	Find creative solutions to marketing challenges without relying on technology.
	Privacy, Security, Ethics	Marketing Ethics	Working in teams, discuss ways in which AI can compromise consumer privacy, manipulate behavior, and perpetuate biases.	Develop ethical decision-making skills in marketing practices
	Information Inaccuracy	Marketing Analytics	Use Internet connected AI tools to verify the accuracy of market research reports in online sources	Develop skills in critical evaluation of data
3	Academic Development	Marketing Communications	Use AI writing assistants to generate and refine marketing messages	Ability to write compelling marketing content for products and services
	Professional Development	Advertising and Promotion Management	Evaluate social media presence and optimize brand strategy	Align social media presence with overall brand strategy for companies
	Content Creation	Digital Marketing	Use AI web services to generate blogs and social media text, images, and video content	Proficiency in multimedia digital marketing

popularity of ChatGPT in subsequent semesters could have influenced respondents' attitudes toward the use of AI for education. This may have introduced variability in student responses, and temporal bias could have influenced students' perceptions and experiences at different times. Future studies could collect data during the same semester to capture a consistent understanding of student perceptions. To remain methodologically consistent and for data validity purposes, ChatGPT was used in all three semesters. Since the basic functionality of free versions of all LLM AI tools today is almost identical, the implications of the findings from this study can apply to any LLM used for education. Although the qualitative nature of the study limits the generalizability of results, the results provide insights into student disposition and perceptions toward ChatGPT use and attitudes toward the use of AI for learning.

The methodology of using LLMs shown in this study to analyze qualitative data is supported by research. The decision-making processes within the LLM can be opaque. This makes it difficult to understand how the LLM arrived at a specific interpretation, which could reflect bias based on the data that was used for training the LLM. Although LLMs

provide the ability to process transcripts at a faster pace in comparison to human researchers, the use of LLMs for qualitative research is a fairly new approach. In this study it was found that the two LLMs that were used identified themes and codes correctly for the majority of responses. However, some nuances in student responses were missed as they were categorized differently by the human evaluators in the study. Some statements that were better placed under one theme were placed under another theme by the LLM, although it can be argued that those statements may fit under both themes as they contained attributes common to each theme. Future research can focus on better understanding how the scalability of LLMs can be combined with contextual and nuanced understanding of human researchers. It is interesting to note that traditional qualitative software vendors are integrating AI into new versions of the software being released. Software vendors can develop LLMs with domain-specific knowledge to make LLMs more efficient in capturing nuances when analyzing transcript data. This would validate the importance and acceptance of AI for data analysis, giving researchers new options for analyzing qualitative responses.



## Disclosure Statement

No potential conflict of interest was reported by the author(s).

## Ethics Statement

All data collected for this study were obtained with the informed consent of participants, ensuring their understanding and voluntary participation.

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## Appendix

**Table A1.** Prompt framework used in OpenAI ChatGPT and Google Gemini LLM for thematic analysis.

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<Prompt>

Inductive thematic analysis is a qualitative research method used to identify themes and patterns within textual data. Its purpose is to gain insights and develop theories grounded in the data itself, rather than imposing preexisting theories or frameworks. Your task is to carefully read and code the data to identify recurring ideas, topics, and concepts that can be grouped into overarching themes.

You will be performing inductive thematic analysis on the following text data. I have given you a transcript of responses from participants. Participants are denoted by P1, P2, P3 etc. in the "Comments" column.

Here are the steps you should follow:

1. Read through the entire text data carefully to gain familiarity and an overall understanding.
  2. Let me explain what a "code" is. A code is like a label or tag that you use to identify and categorize different parts of your data based on the concepts they represent. It is a way of organizing your data so you can analyze it more effectively. Think of it as putting sticky notes on different parts of your interview transcripts or other sources of data to help you remember what each part is about and how it relates to your research questions. Begin coding the data line-by-line.
  3. As you code, look for recurring ideas, topics, and patterns across the data. Group similar codes together into potential themes.
  4. Give me the output data in table format in CSV file. In the first column, include the code. In the second column, include the participant number (e.g. P1, P2, P3 etc.) that is matched to the code.
  5. You will next be identifying themes from codes. A "theme" is like a big idea that emerges from looking at all the different codes you've assigned to your data. It's a broader pattern or concept that helps you understand what the data is telling you overall. Think of codes as individual puzzle pieces, and themes as the bigger picture that those puzzle pieces create when you put them together. Themes help you organize and make sense of your codes by grouping them into larger categories based on shared characteristics or meaning.
  6. Review and refine the themes, ensuring they accurately represent the coded data extracts. Themes should be coherent, distinct from each other, and capture important aspects of the data.
  7. Define and name each theme, providing a clear description of its scope and boundaries.
  8. Analyze how the themes relate to each other. Make sure to look for connections, hierarchies, or overarching narratives that tie the themes together.
  9. Provide supporting evidence for each theme by including relevant coded data extracts and examples from the text.
  10. Can you provide the information in a table format with the following columns: Themes, Theme Description, and Participant numbers that are matched to each Theme.
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