

ChatGPT as a Supporting Medium for Completing Academic Assignments among Digital Business Students

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ABSTRACT

Introduction/Main Objectives: This study investigates the usage dynamics, cognitive impacts, and task level vulnerabilities associated with Generative AI (ChatGPT) adoption among undergraduate Digital Business students. **Background Problems:** Despite providing unprecedented time efficiency, uncensored ChatGPT usage fosters a "copy paste culture" driven by time pressure, assignment overload, and low initial comprehension, leading to severe critical thinking degradation and academic risks such as AI hallucinations. **Novelty:** This paper delineates task specific cognitive risks within Digital Business coursework differentiating strategic ideation from technical coding and proposes structured prompting frameworks and institutional curriculum integration guidelines aligned with national higher education standards. **Research Methods:** A qualitative descriptive method was executed through synchronous online interviews (Zoom) accompanied by screen sharing observations with active Digital Business students selected via purposive sampling. **Finding/Results:** Findings reveal that task risk varies significantly: technical tasks (e.g., programming syntax, basic drafting) present higher copy paste vulnerability, whereas strategic business tasks retain cognitive engagement when paired with role based, constraint driven prompting. Students mitigating AI risk rely heavily on cross verifying outputs against credible primary literature. **Conclusion:** ChatGPT serves as a powerful cognitive scaffolding tool when integrated thoughtfully, but threatens critical reasoning if used as a substitute for learning. Higher education institutions must embed systematic AI literacy, prompt engineering, and information verification directly into business curricula.

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1. INTRODUCTION

The rapid expansion of Artificial Intelligence (AI) technologies, particularly Large Language Models (LLMs) such as ChatGPT, has radically altered academic practices and cognitive paradigms within higher education. Serving as an adaptive cognitive support mechanism, ChatGPT grants real time access to synthesized information, acting as an informal virtual assistant for tertiary students. At Universitas Satya Terra Bhinneka (USTB) in Medan, North Sumatra, the adoption of generative AI has escalated substantially between 2023 and 2024, particularly within the Digital Business Study Program. Digital Business students operate at the intersection of management, technology, and analytics, making them highly receptive to tools that promise enhanced task execution and cognitive efficiency.

Students predominantly leverage ChatGPT to accelerate assignment completion, overcome writer's block, simplify complex conceptual frameworks, and streamline technical workflows. In specialized subjects such as Digital Marketing, E-Commerce, Data Analytics, and Business Application Programming, ChatGPT is routinely deployed to generate marketing campaign outlines, draft initial business strategy proposals, and troubleshoot code syntax errors. However, this intensive interaction introduces critical academic vulnerabilities. A key challenge is AI hallucination the generation of factually incorrect, overly generalized, or entirely fictitious data and reference citations.

When students uncritically accept generated outputs through a superficial "copy paste culture," serious concerns arise regarding cognitive degradation. This tendency is not merely an issue of academic dishonesty, but is strongly driven by systemic pressures such as severe time constraints, heavy assignment workloads, and initial gaps in material comprehension. Without intervention, reliance on AI shortcuts threatens to erode students' capacity for critical thinking, contextual problem solving, and original analytical reasoning.

While prior studies have acknowledged the tension between AI efficiency and academic integrity, there remains a need for granular research examining how cognitive risks vary across specific academic task types, and how intentional prompt engineering can mitigate these risks. Furthermore, current academic discussions often focus narrowly on ethical prohibitions without addressing institutional policy alignment or curriculum development.

Therefore, this study aims to examine the interaction between Digital Business students and ChatGPT at USTB. Specifically, this paper:

1. Analyzes the driving factors behind the copy paste phenomenon and maps the specific academic tasks most vulnerable to critical thinking degradation.
2. Evaluates the role of structured prompting mechanisms and cross verification routines in preserving cognitive sharpness.
3. Formulates strategic curriculum recommendations and institutional policy alignment strategies for Digital Business study programs to build systematic AI literacy.

2. LITERATURE REVIEW

Cognitive tool theory posits that digital technologies can serve as intellectual partners that amplify human cognitive capacities when utilized for complex problem solving. In higher education, Large Language Models function as decision support systems, utilizing Natural Language Processing (NLP) to parse complex queries and produce structured text instantly. As Rahmawati et al. (2023) observed, generative AI significantly reduces the temporal burden of administrative and clerical academic tasks, such as structuring essay outlines and refining grammatical style. However, Rahmawati et al. (2023) also emphasized that a lack of underlying information literacy converts these tools from cognitive scaffolds into intellectual crutches, encouraging an "instant culture" that weakens original reasoning.

Critical thinking in business education involves higher order cognitive domain activities: evaluating empirical evidence, identifying market nuances, synthesizing multi source data, and detecting logical fallacies. The integration of LLMs creates a duality in cognitive engagement. Wibowo and Haryanto (2024) demonstrated in their analysis of student engagement during data analysis tasks that automated tools accelerate preliminary processing, but risk dulling intuitive problem solving if students bypass post generation validation and contextual adaptation.

Furthermore, Suryani (2023) highlighted that reliance on LLMs without structured ethical frameworks increases the risk of academic misconduct and systemic plagiarism. Building on these insights, Chang et al. (2024) noted that learning agility in tech driven environments depends heavily on continuous cognitive adaptation rather than passive information consumption. Similarly, Octoyuda et al. (2022) emphasized that effective technology adoption requires structured leadership and organizational guidance to avoid misplaced reliance on digital tools.

While existing literature establishes the general risks of generative AI in tertiary education, there is a distinct gap regarding task specific cognitive impacts within specialized disciplines like Digital Business. Differentiating between technical execution tasks (e.g., coding) and strategic conceptual tasks (e.g., market entry strategies) is essential for developing targeted pedagogical interventions.

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3. METHOD, DATA, AND ANALYSIS

This study adopted a qualitative descriptive research design to capture the nuanced experiences, prompt engineering behaviors, and cognitive patterns of Digital Business students. The research was conducted at Universitas Satya Terra Bhinneka (USTB), Medan, North Sumatra. Primary data collection took place over a one month period using synchronous video conferencing via Zoom Meetings.

Informants were selected using a purposive sampling technique. The primary inclusion criteria required informants to be active undergraduate students in the Digital Business Study Program at USTB who had utilized ChatGPT regularly for completing academic assignments for at least one full semester. A total of 12 primary informants participated in semi structured interviews. To capture authentic user behaviors, the data collection protocol incorporated a live share screen observation component, allowing researchers to observe real time prompt formulation, query iteration, and output verification on the ChatGPT interface

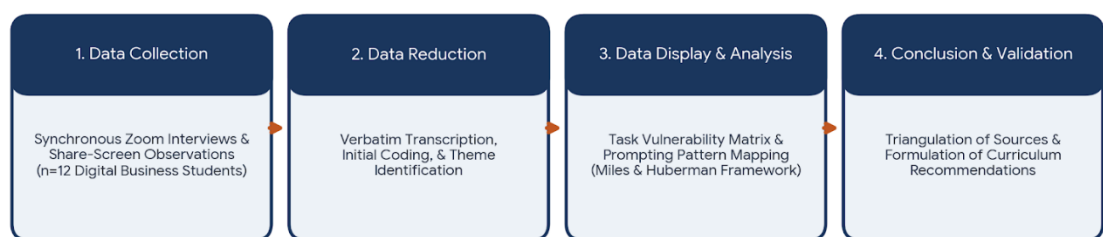


Figure 1. Qualitative Research & Analysis Workflow

Data analysis followed the qualitative interactive framework outlined by Miles and Huberman, consisting of three main phases:

1. **Data Reduction:** Audio/video recordings were transcribed verbatim and coded for themes related to usage motivation, task categorization, prompting structures, and verification routines.
2. **Data Display:** Coded data were organized into narrative matrices comparing cognitive engagement levels across different task types.
3. **Conclusion Drawing and Verification:** Patterns were analyzed to establish overarching conclusions regarding cognitive impact and curriculum implications.

Data validity and trustworthiness were maintained through source triangulation (comparing responses across different student cohorts) and technical triangulation (cross referencing interview statements with recorded screen sharing session logs).

Research Limitation: This study focuses exclusively on undergraduate Digital Business students within a single private university in Medan, North Sumatra. Consequently, while the qualitative findings provide deep

contextual insights, direct generalization to other academic disciplines or institutional settings should be made with appropriate contextual adaptation.

4. RESULT AND DISCUSSION

4.1 Underlying Drivers of "Copy Paste Culture" and Usage Mechanics

Interview data show that the tendency to engage in uncritical "copy pasting" is driven by a combination of academic and situational factors rather than simple laziness. Informants identified three primary catalysts:

- **Academic Time Constraints:** Competing project deadlines across multiple modules push students toward rapid task completion.
- **High Assignment Workloads:** Simultaneous demands for written reports, technical code, and presentation decks create cognitive fatigue.
- **Material Comprehension Gaps:** Complex theoretical concepts or unfamiliar programming syntax lead students to rely on AI generated text as a primary shortcut rather than an auxiliary guide.

Students who succumb to these pressures typically copy raw AI outputs directly into their submissions without re-reading, contextualizing, or verifying the underlying claims. This habit bypasses essential cognitive processing, weakening information retention and critical reasoning skills.

4.2 Task Specific Vulnerability Matrix for Critical Thinking

The impact of ChatGPT on critical thinking is not uniform across all types of assignments. Observational share screen logs and interview data reveal clear differences depending on the nature of the task:

A. Technical & Syntax Driven Tasks (High Vulnerability to Passivity)

In tasks requiring basic computer programming (e.g., C# or HTML/CSS debugging) or standard clerical report formatting, students frequently exhibit higher cognitive passivity. When ChatGPT provides working code snippets to fix errors, students often insert the code directly into their environment without analyzing *why* the original error occurred. While task efficiency is high, deep understanding of programmatic logic is diminished.

B. Strategic Business & Case Study Tasks (Moderate to High Vulnerability)

In subjects such as Digital Marketing and E Commerce, where assignments demand localized market insights or strategic consumer analysis, relying on raw ChatGPT outputs introduces significant risks. AI generated strategies tend to produce generic global frameworks that fail to account for regional nuances, such as local consumer behaviors or specific institutional dynamics. Students who use these outputs uncritically demonstrate a marked decline in strategic analytical depth.

Table 1. Task Level Risk Assessment of ChatGPT Adoption

Task Category	Primary Assignment Examples	Identified Risk Level	Dominant Cognitive Vulnerability	Recommended Mitigation Strategy
Technical / Coding	Syntax debugging, basic script generation	High	Passive reliance on code without understanding underlying logic.	Mandatory code annotation and line by line explanation requirements.
Theoretical / Drafting	Essay summaries, business definition literature	High	Uncritical acceptance of hallucinated or fictitious academic references.	Mandatory cross verification with indexed scholarly databases (e.g., Scopus, Sinta).
Strategic / Analytical	Marketing plans, local e-commerce strategy development	Moderate	Oversimplified, generic strategic recommendations lacking local context.	Role based prompting combined with mandatory localized primary field data.

4.3 Mitigation via Structured Prompt Engineering and Cross Verification

To prevent cognitive degradation, successful student strategies involve moving away from vague, single sentence prompts. Findings show that analytical sharpness is preserved when students employ structured **Role Constraint Context (RCC)** prompting frameworks.

User Prompt Interface (RCC Framework)

[ROLE]

Act as a Senior Digital Marketing Strategist specializing in Indonesian consumer behavior.

[CONTEXT]

Analyze adoption factors for Shopee PayLater among Gen Z university students in Medan, North Sumatra.

[CONSTRAIN]

Do NOT provide generic marketing definitions. Focus on local cultural nuances, financial literacy gaps, and cite verified primary data or empirical studies. Highlight areas needing field validation.

Figure 2. Example of a Role Constraint Context (RCC) Prompting Framework

Furthermore, students who successfully avoid AI induced errors implement systematic cross verification workflows. When ChatGPT outputs theoretical claims or citations, students cross check these items against verified academic databases such as Google Scholar, IEEE Xplore, and national journal indexers. This dual approach uses AI as an efficient ideation partner while preserving human analytical control.

4.4 Aligning Institutional Policy with National Standards

Addressing the academic challenges posed by generative AI requires moving beyond individual student practices to institutional policy. Higher education guidelines from the Ministry of Higher Education, Science, and Technology (Kemdiktisaintek) emphasize that while digital tools should be integrated to support modern learning, academic integrity and core learning outcomes must be safeguarded.

Universities need clear, institutional level AI utilization policies that establish explicit boundary lines:

- **Permissible Use:** Brainstorming, language polishing, outline generation, and initial debugging assistance.
- **Impermissible Use:** Submitting unedited AI generated text, fabricating citations, or using automated tools to complete high stakes evaluative exams.

By formalizing these guidelines, institutions provide students and faculty with clear expectations that balance technical adoption with academic integrity.

5. CONCLUSION AND SUGGESTION

5.1 Conclusion

Generative AI tools such as ChatGPT have become integral to the academic routines of Digital Business students at Universitas Satya Terra Bhinneka. While these tools provide substantial time savings and aid initial problem solving, uncritical reliance creates significant academic risks. Passively copying AI outputs without verification leads to cognitive degradation, reduced critical reasoning, and vulnerability to AI hallucinations.

The degree of cognitive risk varies by task type: technical execution and basic text drafting carry higher risks of cognitive passivity, whereas strategic business assignments require active contextualization. Students who maintain analytical rigor combine structured, constraint driven prompting with systematic cross verification against primary academic literature.

5.2 Suggestion & Curriculum Integration Recommendations

To address these challenges effectively, higher education institutions and specifically Digital Business study programs should shift from passive prohibition to proactive curriculum integration:

1. **Curriculum Integration of AI Literacy:** Embed prompt engineering, AI ethics, and automated content evaluation directly into introductory courses such as *Introduction to Digital Business* and *Business Data Analytics*.

2. **Systematic Information Verification Units:** Introduce explicit training modules on verifying digital sources, detecting AI hallucinations, and conducting rigorous literature reviews within *Research Methodology* courses.
3. **Redesigning Assessment Models:** Transition toward evaluation methods that require higher order critical thinking, such as live oral presentations, defended screen sharing walkthroughs, and practical field research projects that cannot be replicated by generative AI.
4. **Institutional Policy Guidelines:** Establish clear university wide rules for AI disclosure in academic submissions, aligned with national higher education standards.

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