Examining Student and Teacher Perspectives on Undisclosed Use of Generative AI in Academic Work

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Abstract

With the widespread adoption of Generative Artificial Intelligence (GenAI) tools, ethical issues are being raised around the disclosure of their use in publishing, journalism, or artwork. Recent research has found that college students are increasingly using GenAI tools; however, we know less about when, why, and how they choose to hide or disclose their use of GenAI in academic work. To address this gap, we conducted an online survey (n=97) and interviews with fifteen college students followed by interviews with nine teachers who had experience with students' undisclosed use of GenAI. Our findings elucidate the strategies students employ to hide their GenAI use and their justifications for doing so, alongside the strategies teachers follow to manage such non-disclosure. We unpack students' non-disclosure of GenAI through the lens of cognitive dissonance and discuss practical considerations for teachers and students regarding ways to promote transparency in GenAI use in higher education.

CCS Concepts

• **Human-centered computing → Empirical studies in HCI**.

Keywords

Generative AI, undisclosed use, college students, AI in education

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1 Introduction

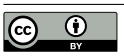
In recent times, Generative Artificial Intelligence (GenAI) tools, such as ChatGPT [65], Google Gemini [28], Microsoft Copilot[1] [60], and Claude [4] have been on the rise in the education domain [3, 32, 69]. Students are using these tools for a range of academic tasks, such as writing [9], solving coding problems [38], and answering course-related queries [13]. Similarly, teachers are also utilizing these tools to create course materials and lecture outlines [32, 40]. With this widespread adoption, ethical issues around the undisclosed use of GenAI (i.e., using GenAI tools to create content without revealing GenAI's assistance to related parties) are surfacing in the education domain [9]. This raises important questions about the appropriate and ethical use of GenAI in academic work, as have already been discussed in the contexts of scientific writing [33, 63], employment [82, 106], and creative media [76]. While a large and growing body of work is exploring GenAI's proficiency in supporting students [39, 69, 113], and aiding teachers in their academic work [32, 58], we know considerably less about students' and teachers' perspectives and practices around undisclosed use of GenAI in academic work.

Recently, scholars have brought forth various negative impacts of GenAI tools on students' learning outcomes [41, 55, 61, 69], particularly when students rely on AI-generated responses without fully grasping the underlying concepts [61] or verifying their accuracy [41]. Moreover, students' undisclosed use of GenAI in academic work is creating tensions in the student-teacher dynamic due to suspicions, false accusations, and a general lack of transparency [29, 53, 107]. Consequently, gaining insights into students' undisclosed use of GenAI is essential to enhance their learning outcomes as well as maintain transparent and efficient interactions between students and teachers.

To this end, we investigate the practices of college students[2] around the use of GenAI tools for academic work without disclosing to others and teachers' perspectives on such non-disclosure. Particularly, we focus on understanding when, why, and how students hide their GenAI use and how teachers detect and manage students' undisclosed GenAI use. We report findings from an online survey involving 97 college students, interviews with 15 college students who had experience using GenAI tools, and interviews with nine teachers who had previously suspected their students

[1] Copilot is Microsoft's productivity-focused GenAI chatbot, formerly called Bing Chat (not to be confused with the GenAI-powered programming assistant GitHub Copilot).

[2] In our study, "college student" refers to any individual, whether full-time or part-time, attending a higher education institution. We focus on this demographic because they are frequent users of GenAI [3] and engage in academic tasks such as writing assignments [93], coding assignments [83, 95], and brainstorming ideas [32], where these tools have been found to be beneficial.



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using GenAI without disclosing. Our analysis details how students decide when to (not) disclose their use of GenAI, the strategies they employ to hide their usage, and the reasons they provide to justify their actions. Alongside, we highlight how teachers adopt various strategies to detect and manage students' undisclosed GenAI use, including outlining rules and policies and providing lower grades. Finally, we capture how teachers assess the risks and benefits of GenAI on students' learning outcomes to decide when to allow (or not allow) the use of these tools in academic work.

Our paper makes three empirical contributions to HCI [105], especially related to technology use in educational settings [68]. First, we present rich empirical insights into current practices of students' undisclosed use of GenAI and how teachers manage such usage. Our findings extend prior work that explored how the use of GenAI influences student-teacher dynamics [53, 107, 112] and creates concerns related to academic integrity [71, 97, 111], including prior CHI contributions on these topics [32, 69, 96]. Second, taking the lens of cognitive dissonance [6, 21], we unpack the inconsistency between students' beliefs and actions around the risks associated with their GenAI use and how students attempt to repair this inconsistency by forming—at times misguided—beliefs and adapting their actions around GenAI non-disclosure. Finally, we discuss practical considerations to ethically integrate GenAI in academic workflows through academic task redesigns, reforming students' misguided notions, and promoting transparent and reflective conversation between students and teachers.

2 Related Work

We situate our study within the existing research on GenAI in education as well as literature on cognitive dissonance.

2.1 Generative AI in Education

With the widespread adoption of large language models (LLMs), GenAI tools e.g., ChatGPT, Copilot, and Gemini are increasingly being integrated into educational contexts [3, 69, 96]. These tools can potentially support students in various tasks, including writing and brainstorming ideas [15], generating coding solutions [38], and addressing coursework-related queries [13]. Students perceive these tools to be beneficial for idea generation [110] and receiving personalized feedback [8, 32, 69]. Researchers have also started building tools that leverage GenAI to enhance students' productivity [39, 50, 67, 99]. For example, Abolnejadian et al. [1] developed a custom learning platform that uses GPT to create educational materials personalized to each student's background. Additionally, researchers and practitioners have focused on building GenAI-powered applications to assist teachers in preparing lesson plans and course materials [32, 40, 58, 81], such as Khanmigo [66] and Magicschool.ai [84]. Similarly, Tan and Subramonyam [91] developed a framework to help teachers leverage GenAI's capabilities for creating learning activities tailored to students' diverse needs.

Despite the promising potentials of GenAI tools, there is a heightened awareness of associated risks, including issues with inaccuracy and bias [5, 37, 69]. These tools can negatively affect students' learning gains when they submit AI-generated responses as their assignments without understanding the underlying concepts [51, 61, 87, 89] and provide an unfair advantage over peers [108]. Researchers highlighted teachers' concerns about the negative impacts of GenAI on knowledge and skill acquisition, especially when students fully trust AI-generated responses without verifying their accuracy [41]. There are also concerns about academic integrity [55, 97, 111], since AI-generated content can sometimes circumvent detection from existing AI detection tools [71].

To address these concerns, a growing body of work focuses on pedagogical and curricular redesign to support teachers in integrating GenAI into academic work while reducing its misuse [14, 30, 31, 54, 74, 86, 88, 109, 112]. In recent studies, teachers shared how they modified their practices to incorporate GenAI [46, 72, 75, 100], for instance, by allowing students to use GenAI for brainstorming while redesigning tasks such that students would need to engage in critical thinking to complete the tasks [45]. Mahon et al. [54] provided guidelines for educators to integrate GenAI in six levels, progressing from complete avoidance to fully embedding it. Others suggested teaching students how to effectively formulate help requests to GenAI [35] and how to specify problems and evaluate solutions iteratively [56].

Complementing this work, researchers have also explored how GenAI tools create tensions in student-teacher dynamics [9, 29, 53, 107, 112]. For instance, analyzing Reddit data, Wu et al. [107] observed students' frustration over false accusations of using GenAI and teachers' increasing workload to manage students' GenAI use. Luo [53] highlighted how using GenAI creates a "low-trust environment" between students and teachers, where students feel unsafe to use these tools. Barrett and Pack [9] found that while students and teachers agree on using GenAI to brainstorm ideas, they consider using GenAI to complete writing assignments—with or without disclosing—as unacceptable. Our study extends this scholarship by contributing to a detailed understanding of how and why students choose to use GenAI in their academic tasks without disclosing and how teachers are navigating such undisclosed use.

2.2 Cognitive Dissonance in Social Contexts

Cognitive dissonance [21] is a psychological theory that describes the psychological discomfort experienced by an individual when there exists an inconsistency between their beliefs and their actions. This discomfort prompts a recovery process to reduce dissonance—either by changing actions to align with beliefs or changing beliefs to align with actions—by changing one of the conflicting elements. The concept of cognitive dissonance [6, 85] has been applied to explain human behavior in various contexts, such as technology adoption [57], social media [7, 36, 73], traveling [18], and shopping [25]. For instance, Marikyan et al. [57] showed that individuals question their purchase decisions and demonstrate cognitive dissonance when the performance of smart home technologies does not meet their expectations. To reduce this dissonance, individuals try to rationalize their choices by seeking positive information about the technology. Jeong et al. [36] found that people experience cognitive dissonance when they are exposed to opposite opinions on social media and that they intentionally skip reading posts with contradictory opinions as a strategy to reduce their dissonance. In this study, we draw on the notion of cognitive dissonance to understand how college students perceive their undisclosed use of GenAI in academic work and how their beliefs and actions are shaped by their GenAI use.

3 Methods

To understand students' undisclosed GenAI use, we conducted an online survey with college students followed by interviews with both students and teachers, with approval from our university's Institutional Review Board.

3.1 Participants

We distributed the online survey through Slack channels, university mailing lists, and snowball sampling method during May–July, 2024. The survey received valid and complete responses from 97 college students who used GenAI chatbots, such as ChatGPT, Google Gemini, Microsoft Copilot, etc. in their academic work. Table 5 in the Appendix reports survey respondents' demographic information on an aggregate level. Out of 91 respondents who expressed interest in follow-up interviews, we scheduled interviews with 15 students (6 female, 8 male, 1 Non-binary; 3 White, 6 Black, 6 Asian) who mentioned in the survey that they did not always disclose their use of GenAI in academic work. Table 6 in the Appendix reports details of interviewed students' educational background and GenAI use. Subsequently, to gather teachers' perspectives on students' GenAI use, we recruited nine teachers for interviews by collecting their publicly available email addresses (2 female, 7 male; 6 White, 1 Black, 1 Hispanic, 1 Asian). All interviewed teachers taught post-secondary students in universities and had encountered situations where they suspected students using GenAI without disclosing. Table 7 in the Appendix presents details of their teaching background.

3.2 Survey and Interview Procedures

Drawing on prior studies that captured students' GenAI use [3, 38, 49, 69, 96] and adapting to our focus on nondisclosure [29, 70, 82, 106], we developed a survey questionnaire that included 16 multiple-choice, Likert-scale, and open-ended questions divided into three sections about students' (1) frequency and scenarios of using GenAI in academic work, (2) disclosure of GenAI use, and (3) demographic information. The survey was implemented in Qualtrics and structured to take approximately 4–5 minutes to complete to reduce cognitive overload and increase completion rate [47, 79]. We refined the survey through pilot testing with 9 students. Survey respondents did not receive compensation.

All interviews with students and teachers were conducted in a semi-structured, one-on-one format over Zoom with participants' verbal consent. For the student interviews, we queried which GenAI chatbots students used and for what academic tasks, their reasons for (not) disclosing GenAI use, and justifications for non-disclosure. We requested students to show examples via screen sharing from their previous chat histories on their preferred GenAI chatbots and perform live demonstrations of how they craft prompts and curate AI-generated responses to avoid disclosure. To minimize social desirability bias [11] in students' responses, we reminded them that the purpose of the study was to only understand their experience with GenAI and that the data will not be shared outside the research team and will be anonymized in publications.

Our interviews with teachers were informed by insights from student interviews. We asked teachers about whether and how they suspected their students using GenAI for academic tasks and how they managed those situations. To probe deeper into their opinions on students' undisclosed use of GenAI, we presented teachers with seven scenarios (Table 3) and four statements (Table 4) reflecting students' beliefs about GenAI as captured by our student interviews. All interviews lasted approximately 45 minutes each, were video-recorded, and later transcribed for analysis. Participants were compensated with a US$15 Amazon gift card each. The survey questionnaire and the interview guides used with students and teachers are included in the supplementary materials.

3.3 Data Analysis

To analyze quantitative data gathered from the survey, we followed statistical analysis techniques described by Kitchenham and Pfleeger [42] and reported the frequencies of how often an item was selected. Additionally, we adopted the frequency analysis method used by Liang et al. [49] and reported the cumulative percentages of respondents who 'agreed' or 'strongly agreed' with a statement and those who 'disagreed' or 'strongly disagreed' with it (see Table 2). Frequencies for answers to situation-related questions were analyzed similarly. For instance, regarding the statement "I copy the responses of GenAI chatbots almost verbatim," 33% respondents reported doing so always (9%) or often (24%), while 30% indicated they do so rarely (21%) or never (9%). We performed non-parametric tests to assess whether there are significant differences between the frequencies reported, given our data was not normally distributed. The exact tests performed (e.g., Mann-Whitney U test, Friedman test) depended on the data type (e.g., ordinal) and the particular questions answered through the tests. We performed statistical tests in Python using Scipy, Pandas, and Plotly libraries [22–24].

To analyze qualitative data from the interviews, we adopted a reflexive thematic analysis method [12]. The first and second authors open-coded all transcripts and met weekly to review all codes and data. Our initial codes from student interviews highlighted instances, such as paraphrasing AI-generated responses, selectively disclosing GenAI use to peers, and using GenAI to complete assignments, etc. Similarly, some initial codes from teacher interviews included suspecting GenAI use from the style of submitted assignments, updating course policies and assignments, and so on. After extensive discussion and comparison of data and codes as a group, we developed three overarching themes that captured students' decisions and practices around when, how, and why (not) to disclose their use of GenAI in academic work. Subsequently, we presented two central themes describing how teachers suspect, detect, and manage students' undisclosed use of GenAI in academic work.

4 Findings: Student Survey

We begin by investigating how frequently college students used various GenAI chatbots in academic work, whether or not they were allowed to use GenAI, and how frequently they disclosed their GenAI use (Table 1). Unsurprisingly, ChatGPT was the most popular tool among the respondents (89) followed by Gemini (45) and Microsoft Copilot (36). Fifty-two respondents were permitted to use GenAI in their coursework while only 18 were not allowed. Notably, only nine respondents always disclosed their GenAI use while nine never disclosed.

Table 1: Survey respondents' (n=97) use of GenAI chatbots in academic work.

GenAI chatbots used	Count	Allowed to use GenAI in academic tasks?	Count	Disclosing GenAI use	Count
ChatGPT	89	Yes	52	Never	9
Google Gemini	45	No	18	Rarely (about 30% of the time)	23
Microsoft Copilot	36	Unsure	20	Sometimes (about 50% of the time)	32
Claude	16	Other	07	Often (about 70% of the time)	24
Perplexity	13			Always	9

Table 2: Students' GenAI use in academic tasks. Percentages on the chart corresponding to a statement represent the cumulative percent of the distribution that reported 'Strongly Agree'/'Agree' or 'Always'/'Often' (left) and 'Strongly Disagree'/'Disagree' or 'Rarely'/'Never' (right). For example, regarding the statement "I copy the responses of GenAI chatbots almost verbatim," 33% respondents reported doing so always (9%) or often (24%), while 30% indicated they do so rarely (21%) or never (9%).

Situation	Distribution
A. How GenAI Responses are Used (n=97)	
I copy the responses of GenAI chatbots almost verbatim	33% 30%
I significantly modify the responses of GenAI chatbots to improve those	56% 13%
I significantly modify the responses of GenAI chatbots to make those seem like not AI-generated	61% 16%
I only take ideas from the responses of GenAI chatbots but do not copy those	54% 18%
Always Often (about 70% of the time) Sometimes (about 50% of the time) Rarely (about 30% of the time) Never	
B. Reasons for Using GenAI (n=97)	
I want to find the solution to a problem faster	77% 7%
I want to brainstorm starting points to write the solution to a problem	76% 6%
I want to find potential solutions that I am aware of but can not remember	75% 10%
I want to skip using search engines to find the solution to a problem	64% 12%
I want to skip using class lectures, books, or assigned readings to find the solution to a problem	48% 33%
I want to reduce the mental effort to find the solution to a problem	66% 17%
C. Reasons for Not Disclosing GenAI Use (n=88)	
I feel I will get penalized if I disclose it	44% 27%
I feel others will judge me if I disclose it	54% 30%
I feel that it is cheating	37% 35%
I want to get a competitive advantage over my peers	39% 25%
D. Justifications for Not Disclosing GenAI Use (n=88)	
I feel that using GenAI chatbots is similar to using other technologies like Grammarly	66% 12%
I feel that instructors are also using it to create assignments	57% 16%
I feel that it is not harmful to anyone	69% 8%
E. Feelings About Not Disclosing GenAI Use (n=88)	
I feel afraid	31% 49%
I feel stressed	29% 43%
I feel guilty	29% 42%
I feel no strong emotion	26% 34%
Strongly Agree Agree Neutral Disagree Strongly Disagree	

Turning to the results from our frequency analysis, the Mann-Whitney U tests reveal that the proportions of respondents selecting 'Often'/'Always' or 'Strongly Agree'/'Agree' differed significantly from those selecting 'Rarely'/'Never' or 'Strongly Disagree'/'Disagree' across all statements in Table 2 ($p < 0.05$). With respect to how they used GenAI in academic tasks (Table 2-A), most students modified GenAI responses, either to improve them (56%) or to avoid making them seem AI-generated (61%). Conversely, only 33% copied AI-generated responses verbatim, while 54% referred to GenAI to gather ideas only but did not copy their responses.

Regarding their motivations for using GenAI (Table 2-B), students mostly used these tools to find solutions to problems faster (77%), brainstorm starting points (76%), find potential solutions that they cannot recall (75%), and reduce mental effort (66%). Next, we examine the responses from students who did not always disclose their GenAI use (n=88). These students avoided disclosure (Table 2-C) because they felt that others would judge them (54%), they would get penalized (44%), to get a competitive advantage over peers (39%), or it was cheating (37%). Regarding their justifications for this non-disclosure (Table 2-D), they felt that avoiding disclosure was not harmful to anyone (69%), that using GenAI was similar to using other technologies like Grammarly (66%), and because instructors were also using it to create assignments (57%). Additionally, most students reported not feeling afraid (49%), stressed (43%), or guilty (42%) about not disclosing their GenAI use (Table 2-E).

Finally, we performed Friedman tests with Post-hoc analysis using Wilcoxon Signed-Rank tests with Bonferroni correction across all sections in Table 2. While assessing variations in how students used GenAI for academic tasks (Table 2-A), we observed significant differences between students copying AI-generated responses verbatim and modifying responses to improve them ($p < 0.01$), and copying responses verbatim and modifying them to avoid appearing AI-generated ($p < 0.01$). However, for the rest of the sections (B, C, D, E), there were no significant differences. Our student interviews corroborated these findings and provided deeper insights into students' undisclosed use of GenAI, as we describe next.

5 Findings: Student Interviews

Echoing findings from recent studies [3, 13, 15, 69, 78, 112], our analysis showed that college students are using GenAI tools for various academic tasks, ranging from brainstorming ideas and finding possible solutions for assignments to performing research-related tasks and writing papers (see Table 3). While using GenAI for these tasks, students carefully consider when to (not) disclose their use of GenAI and to whom, how to avoid disclosure, and what reasons might justify their undisclosed use of GenAI.

5.1 Deciding When (Not) to Disclose GenAI Use and to Whom

The lack of a standardized approach to GenAI across various courses results in students having to navigate a patchwork of different rules and attitudes of instructors, which affects their willingness to disclose their use of GenAI. Explicit permission from instructors provides students the confidence to use GenAI without concerns about potential repercussions. For example, in a course on 'Mobile App Development,' S7 disclosed using ChatGPT for assignments by adding references to it, because his instructor explicitly approved GenAI use. However, in some other classes, policies around GenAI use were *"in the gray area where I assume that the professor would not really appreciate if the answer is generated by ChatGPT."* In those classes, S7 opted to hide his use of GenAI fearing that the instructors might *"react negatively"* and not be as accepting or aware of the benefits that GenAI could offer. S2 added, *"I think most of our lecturers need to still come to terms with the use of ChatGPT."*

While not to the same extent as to their teachers, most students remained cautious about disclosing their GenAI use to their peers as well, considering the limited acceptance of these technologies within their academic community and the social stigma associated with it [97]. Unless directly questioned by their peers, S4, S7, and S8 preferred to keep GenAI use as confidential as possible. This hesitance to reveal their use of GenAI stemmed from a fear that others might consider their actions as *"cheating"* (S11) and portray *"negative views"* (S2) regarding the authenticity of their work. S5 shared, *"I feel like they'll judge me and maybe they'll consider me as being too reliant or too lazy to do it myself."* S1, S2, S7, S11, S13, and S14—all shared a common approach when it came to disclosing GenAI use to their classmates; they revealed only to *"close peers"* (S7) and who were *"doing the same thing"* (S11). For instance, S1 discussed using ChatGPT with a select group of trusted friends while helping one another with their assignments. She said, *"They are my friends so I don't feel ashamed to admit that I'm using it but I wouldn't admit it to the whole class, of course."* S7, an international student in the US, gave a similar example: *"Suppose I meet someone from my country and they are asking me, 'How did I do it [assignment]?' Then I would tell them that 'Yeah, I used ChatGPT.'"* This selective disclosure was not only about comfort and trust but also about ensuring that their practices would not be judged harshly within their immediate social circles. Further, the decision to disclose the use of GenAI with peers is heavily shaped by the fear of *"being reported"* (S6) to the authorities.

> S3: *"We won't openly admit it to other people, because let's say, I use ChatGPT and you use ChatGPT. We get different results, maybe I get 80 [marks] and you get 50 [marks]... And in some cases, the other person can go tell the teacher that I actually used ChatGPT... At the end of the day, a competition in class is going to get the best of us and not everyone handles loss very well."*

The perceived loss of a competitive edge over others drove some students to conceal their use of GenAI, lest the strategies that *"worked well"* (S15) for them get widely adopted. S6 said, *"I don't want to share it with my friends because I believe it's (using Gemini) a trick that they do not know about. So, I just let them know I handle my assignments on my own."* What's more, S6 avoided using GenAI in group projects and only saved it for the purpose of individual assignments. Thus, students tried to strike a delicate balance between collaboration with peers and safeguarding their academic *"tricks"* to maximize personal benefits while minimizing risks associated with disclosure of GenAI use.

Additionally, students assessed the nature of their academic tasks to decide whether or not it would be necessary to disclose their GenAI use. For instance, S12 acknowledged that using GenAI to write an entire research paper or an essay from scratch and then *"claiming it as my own"* would not be *"acceptable,"* considering that written essays represented one's intellectual contributions. However, for tasks that did not require significant intellectual merit and creativity, S12 and S13 felt that *"it's not necessary"* to disclose the use of GenAI. For instance, while creating interview guides as part of a research project, S13 used ChatGPT to generate demographic questionnaire without disclosing it to his advisor, since he did not consider these tasks to be *"important enough"* in terms of intellectual contribution. Similarly, S12 *"never asked permission"* for using ChatGPT to fix grammatical mistakes in the text she had already

written and to refine what she described as her *"clunky bad code... to make it run faster."* She explained, *"I don't think it's frowned upon if you're using it as a tool to improve your own work... to help streamline already existing content or consolidating and summarizing... and to improve your writing grammatically."*

We noted a different trend of GenAI disclosure in research environments, where the integration of GenAI is increasingly seen as a norm rather than an exception. S12 shared, *"I've mentioned [ChatGPT] to my PI (Principal Investigator)... [and] people in my cohort, cause they use it as well... and nobody has an issue with it."* S11 recalled a scenario where he implicitly disclosed using GenAI to his PhD advisor by sharing his screen during a remote meeting. He elaborated, *"I prompted ChatGPT to fix a part of my code, and then, quickly copied the code. So, he could clearly see what I was doing."* Such implicit disclosure—by demonstration rather than direct permission—was particularly effective in environments where the utility of GenAI is more valued. In S11's case, his mentors and master's supervisor had previously recommended using ChatGPT for certain tasks, such as writing code with simple logic (e.g., flipping a 2D matrix) and taking GenAI suggestions for editing manuscript drafts, which influenced his decision to disclose the use of ChatGPT.

5.2 Figuring Out Strategies to Avoid the Disclosure of GenAI Use

As also showed in our survey results (Section 4), students often avoided using GenAI responses verbatim in their assignments to ensure that their work did not appear *"too formal... [or] look AI-generated"* (S9). Instead, they modified the content by adjusting the tone and style to align more with their natural writing style. S7 explained, *"I try to understand what [ChatGPT] told me. Then I rearrange or reorganize lines keeping the context similar."* S5, similarly, paraphrased and integrated her own thoughts by *"omitting a sentence and adding some new words and sentences"* so that it *"doesn't seem directly copy-pasted from AI."* For example, she changed an AI-generated sentence "`Unemployment can strain family relationships, leading to increased marital conflicts, domestic violence, and challenges in providing for children's needs`" to "`Some of the family members who are not employed in a family often face stress in the family relationship which leads to marital conflicts or domestic violence. This means the family will face poverty and lack of basic needs.`" Here, S5 expanded on the concepts given by the tool (e.g., `strain family relationships`) and altered the sentence structure that commonly occurred in AI-generated content (e.g., by replacing the present participle '`, leading to`' with a relative pronoun '`which leads to`').

Such strategic paraphrasing and modification techniques helped students ensure that their assignments did not mirror those of their peers, given that *"ChatGPT tends to give the similar results to every person... when the topic is very specific"* (S1). For example, S1 adopted a multi-layered editing approach to differentiate her submissions from those of her peers who might also be using ChatGPT. During interviews, she probed ChatGPT to paraphrase its initial response to her prompt about ethical issues in financial reporting. However, she noted that ChatGPT *"did not quite paraphrase and gave you almost the same responses."* To counter this, she opted to *"manually modify the [paraphrased] response."* She elaborated, *"I will make sure to use synonyms for the big words, for example, 'backbone' [so] that a friend of mine or anyone in the class will not use the same words."*

Similarly, for coding tasks, S13 modified ChatGPT-generated variable names, while S8 optimized the generated code by adding comments to disguise its GenAI origin. Conversely, S9, S11, and S14 typically used the codes provided by ChatGPT verbatim, except for fixing errors when needed. S9 explained, *"For coding assignments, I don't usually modify it... if it's correct, because what ChatGPT gives me and what I would write is similar."* Thus, students felt that, unlike general writing, the formulaic and syntax-based style of programming languages meant that codes—whether AI-generated or human-written—had a similar appearance and required little to no modification to avoid the disclosure of GenAI use.

Students also considered the likelihood *"getting caught"* (S1, S3) by AI detectors or copy-checkers. S1, S5, S8, and S11 decided how much effort they would invest in modifying AI-generated responses *"depending on the instructor's attitude"* (S8).

> S1: *"I feel like all the lecturers do not approve of ChatGPT. All of them. But some are not so strict... they don't check whether students use it or not... With lenient lecturers, what I'll do is just maybe shuffle the points [of the AI-generated response], like point 1 can be point 3."*

Students also adapted their non-disclosure strategies based on the submission formats. For instance, S3 perceived a lower risk of detection in printed assignments and made minimal changes to the AI-generated content. Conversely, she took extra precautions for online submissions and used AI-generated responses only as a guide and rewrote content in her own words.

Overall, these examples illustrate the diverse strategies students adopted to hide their GenAI use, ranging from simple tactics like reorganizing bullet points to more sophisticated techniques like multilayered paraphrasing of AI-generated content. Although these strategies helped students hide their GenAI use, they still felt a need to come up with justifications for using GenAI in academic work.

5.3 Justifying the Risks of GenAI Use against Perceived Benefits

While students adopted GenAI tools for various academic tasks, often without disclosing, they were cognizant of the risks associated with relying too heavily on GenAI. Several students acknowledged that extensive reliance on GenAI for academic tasks can impede their learning, critical thinking, and skill development, eventually hampering their performance in exams where access to computers or GenAI were limited.

> S1: *"[ChatGPT] encourages a little bit of laziness. When I'm doing the research myself, then maybe I can learn a few things here and there. Now, the goal for me is just to finish the assignment, not to understand what the assignment was about."*

> S6: *"There are situations I believe I don't learn so much. When we are handling a module that involves a lot of essays and philosophical works, I will end up using AI without actually knowing [the topic] and when the*

> *exam time comes, where we are not allowed to use our computers or AI... it gives me a hard time."*

> S14: *"If I am using ChatGPT all the time, I might tend to learn something, then forget and never go back, because ChatGPT made the thing easy for me... It's not letting you think... So not being able to remember certain facts, not learning things—it scares me and this is one of the worst cases that it can have."*

Despite these negative impacts of GenAI use on their learning, students highlighted a number of reasons that they believed justified the use of GenAI in academic tasks. One of the most salient reasons students cited was the sheer amount of time they could save by using GenAI to streamline their work—time they felt could be better spent on more important work, either related to their research or learning a favorite topic.

> S11: *"As PhD students, we have way more to do each day than the available hours. If it's taking some pressure off me, then that is just something I'm gonna keep using. Because for me, overall, that will be more beneficial...the more time I'll have for myself to do something else, the better it will be."*

> S12: *"I'm not a great coder. [ChatGPT] is a lot quicker than me trying to figure it out. So, I can spend that time running my experiments and doing other things in the lab instead of beating my head against the computer. So, I definitely feel a sense of relief."*

> S14: *"I am very interested in the computational side. But we have some mandatory courses that are heavy on biology. I don't understand the biology part very well, so I don't enjoy it. That's why I care less about those parts. So, I often use ChatGPT to complete my assignments on those topics."*

S1 and S4 thought that GenAI helped them balance their academic and personal responsibilities by making time for them to attend to other demanding aspects of their lives. S1, who worked as a part-time waitress, often felt *"very tired to do anything"* when she returned home and relied on ChatGPT to complete her school projects. Others accepted that by using GenAI secretly to complete assignments, *"we are looking for that easy way out"* (S3). However, they rationalized their actions by highlighting that GenAI helped them deal with stringent deadlines and course requirements and improved their well-being by reducing academic pressure. S5, S6, S9, and S11—all expressed that they felt *"relieved"* and *"less stressed"* by using ChatGPT when they did not *"have much time to complete"* assignments. S11 explained, *"Just trying to start a text, even if [ChatGPT] generates something that is not exactly right, maybe 50% right, that is also a lot of load taken off my shoulder."* S9 added, *"I don't think I should have done it (using ChatGPT secretly), but in the interest of passing the course, I had to do it."* Some others justified submitting AI-generated content to meet the impending deadlines with the belief that they would *"cover all topics"* (S13) before the final exams and *"definitely look into the assignments in the future"* (S8). Thus, students operated under the assumption that they would put in the effort when they needed to understand a topic thoroughly.

Some students commented that they felt compelled to refer to GenAI due to the lack of high-quality learning resources provided by their teachers. S13 said, *"I don't have any choice if teachers cannot teach well and they would create assignments that would be really really hard... So I'd say that teachers are also making the students go to the ChatGPT and copy whatever it generates."* S3 further rationalized her use of GenAI by implying, *"Teachers also set the exam questions using ChatGPT. We feel that seeing the questions."* Thus, some students felt that if educators could leverage AI for course preparation and evaluation [29], they should also be allowed to use these tools for completing their work. S5 and S12 similarly subscribed to a bandwagon effect [90] to justify using GenAI, saying *"My friends also use it and I feel there's no reason of me not using it"* (S5).

Additionally, some advocated for using GenAI in academic tasks anticipating that these tools would be available in their future *"professional settings"* (S11). Although S9 occasionally felt guilty about using ChatGPT for her assignments, she felt *"okay at the end"* knowing that *"ChatGPT is gonna be around even in the future... I'll never actually need to do anything from scratch. Like if I have a job and have to do the same task, I can still use ChatGPT."* S14 also rationalized using GenAI for coding tasks, saying *"in the next five years, there might not be any need of coding anymore."*

While students came up with various justifications for continuing to use GenAI, some desired to mitigate the negative impacts of GenAI on their learning outcomes. S1, S4, S7, S9, S12, and S13 set boundaries for how to use these tools that would boost—rather than hinder—their learning. For example, S4 commented that he *"tried not to take everything from [ChatGPT] and understand the information first before using it."* Similarly, S7 deeply engaged with AI-generated responses, verified it using other sources e.g., research papers, modified it, and in this process, he felt that *"I'm understanding the topic... I'm doing what the instructor has instructed me to do. I'm actually learning."* S1 elaborated on how she struck a balance between using GenAI for answering theoretical concepts versus solving practical problems on her own.

> S1: *"I'm comfortable using chatGPT for just the theory parts because that's just like an easier version of doing Google Search... For the practical part... if I ask it to do a balance sheet question for me... then I'm not only cheating but I'm also losing... When I go for my internship, if I'm asked to do the same task, I wouldn't know the task... So, that's one thing I actually take interest on and make sure I do myself."*

S1, S9, S13, S14, and S15 used GenAI only *"as a helper tool,"* equivalent to other widely-accepted tools in academic work e.g., search engines for information seeking, Jupyter Notebook for coding, and Grammarly for spellchecking. S13 described, *"For coding, it's not like I have asked it to solve the whole problem... I will be doing it on my own... I just forgot the syntax. So instead of Googling, I would ask that to ChatGPT to save some time."* Thus, students justified their GenAI use by internalizing certain beliefs but also minimized its use in certain tasks to enhance their overall learning gains.

6 Findings: Teacher Interviews

Our interviews with teachers further deepened our understanding of students' undisclosed use of GenAI with insights around how

teachers detected and managed such usage and how they adjusted their pedagogical practices [45, 46] considering the impacts on students' learning outcomes.

6.1 Detecting and Managing Students' Use of GenAI Tools

Aligning with students' assumptions about their submissions bearing the mark of AI-generated content (Section 5.2), all teachers expressed confidence in their ability to detect distinct *"patterns"* and generic responses that were characteristic of GenAI output [27], such as *"mechanical non-human voice, excessive use of adverbs and adjectives, awkward use of punctuation, excessive commas, and semicolons used in awkward ways"* (T7). This was particularly common when the assignments included tasks where GenAI tools were more likely to be used [32, 49]. For example, T4 noticed a trend among his students where they prepared summaries of articles, videos, or readings using GenAI instead of *"taking the time to watch them or read them themselves."* T6 recalled an incident where a student provided a *"generalized response"* which did not address the specific questions posed in the assignment, raising his suspicion. To confirm, he asked ChatGPT the same question and received a similar response. Likewise, T2 reconfirmed his suspicion of students' GenAI use by *"running the text through a detector, which instantly flags it as AI-generated. I don't run everything through it, only the things that are clearly AI-generated, so I can say it's not just my opinion, but also verified by the tool."* Sudden behavioral changes among students or unexpected improvements in their grades also raised T1's suspicions.

When suspicions arose about students' undisclosed use of GenAI for assignments, T2 and T5 chose to actively confront them [29, 53] and considered *"making an official complaint."* Others, however, avoided direct confrontation, because as T7 said, *"I haven't found the language to do that yet. It's difficult because, on my part, it's a guess. I don't want to accuse them of something [if] they didn't do it."* T9 recalled an instance where a student became *"super upset"* after being confronted about using GenAI. Instead of directly confronting, T6 relied on other *"safeguards in place"* to handle the suboptimal quality of submissions resulting from using GenAI. He said, *"They'll be punished either way... like getting a bad grade for not following the assignment."*

Teachers noted that the risks associated with students' undisclosed use of GenAI were on par with traditional forms of cheating; however, what magnified its impact was the lack of concrete evidence [71]. T5 said, *"It's easier to get away with because you're not cheating off of somebody else. You're just having the robot do your homework."* To make matters complicated, T7 noted that existing AI-detector tools were *"not so reliable, so it's really hard to outline policies [and] consequences."* Hence, to minimize students' GenAI use, teachers turned to adapting their own classroom practices. T7 considered reintroducing traditional paper-based exams to reduce students' likelihood of using GenAI. At the beginning of each course, he (and also T6) cautioned their students that they could detect when GenAI was used in assignments. T2 discussed with the students the risks of *"misrepresenting"* AI-generated content as one's own work in academic and professional settings, saying, *"It's not ethical. It's not good for you. It's not good for the vibe of the class. Once you graduate, it's not going to be good for your colleagues. Because if there's no accountability to the AI... the consequences could be pretty serious."* T4 also clarified to students that undisclosed use of GenAI could introduce *"financial or legal concerns... [because] a lot of times, it's coming up with copyrighted materials."* Some teachers devoted class time to encourage students *"to understand how [GenAI tools] work, what their strengths and limitations are, and also to use them ethically"* (T2). T8 transparently shared her own use of GenAI with students and demonstrated to them *"ways that I think are appropriate to use these tools and ways that aren't."*

> T8: *"One thing I talk about is I'm dyslexic, so I actually rely on ChatGPT to help me with editing and grammar a great deal... I show them how I cite when I've used it. I try to give them an ethical, moral guide... And then I also tell them about the threats."*

A common approach among teachers to handle students' GenAI use involved clearly defining their expectations and policies in the syllabi. For instance, T6 explained to students that *"It's okay to use ChatGPT if you prompt it for certain facts or something like that. You just need to cite it correctly because that'll help identify what part of your essay is written with GenAI."* To accurately assess the extent of AI assistance and students' own contributions to their assignments, T1, T4, T5, and T6, instructed students to submit the prompts they had used and the GenAI responses to those prompts, along with *"iterative drafts"* (T4) outlining the *"version history"* of whether and how they updated the GenAI responses to *"make more specific to their works using the articles from the class"* (T6). These extended submissions *"helped me at least verify their understanding of it,"* noted T5. In contrast, T9 was *"very open"* about her students using GenAI without disclosing, since she viewed it as equivalent to other tools (e.g., SPSS, Tableau) that are used in academic work without citation. While she did not want her students to use ChatGPT for some assignments (e.g., forum discussions), she encouraged leveraging it for *"problem-solving."* For example, she demonstrated in her class *"how we can use ChatGPT as a tool to fix the bug."*

Teachers also tried to understand students' perspectives and identify why they might resort to using GenAI instead of spending time and effort on the assignments. T2 observed that *"students do this when they're overwhelmed by coursework or don't view the assigned work as valuable. It usually happens at the end of the semester when everyone is crunched for time. ... They have other pressing issues, and they don't have the mental space to think about everything."* Moreover, T2 considered students' GenAI use for certain tasks as a signal of *"what assignments they actually value,"* based on which he attempted to *"redesign assignments that are more respectful of students' time and more valuable to them."* In one assignment, T2 originally probed students to ask questions about the readings on Discord and answer others' questions to enhance peer-to-peer learning. However, suspecting that students were using GenAI to answer peers' questions, he modified the assignment and asked students to only react on the questions that intrigued their curiosity and optionally respond to the questions they were enthusiastic about. This approach helped him prioritize *"what to talk about in lectures without forcing students to do what they perceive as busy work."* More broadly, teachers emphasized the need to build a transparent learning environment through *"a process of trust."*

> T3: *"Like the take-home, open-book tests, it's really an act of faith where I say, 'I am trusting you with this' and leave it up to them to decide what to do with the trust I am placing... The trust is rewarded often enough that I don't feel the need to change my approach."*

Thus, teachers developed a plethora of strategies to manage students' undisclosed GenAI use, ranging from clearly outlining rules in the syllabi to developing a trust-oriented learning environment.

6.2 Adapting Strategies Based on the Impact of GenAI Use on Students' Learning Outcomes

On the whole, teachers were aware of the various promises and pitfalls of GenAI. The consensus among teachers was that banning these tools outright would be futile because of their wide availability to students [34, 46]. Instead, they advocated for a balance between the use and non-use of GenAI in a way that would maximize students' learning gains and reduce potential risks. As T7 asserted, *"My relationship to AI is not to demonize it or get rid of it. It's just placing it within the framework of a tool to be used."* T2 also commented, *"I don't think there's anything that I would categorically state AI should never be used for in class... [or] professionally after college, as long as it's used ethically and thoughtfully and transparently."*

During our interviews, teachers outlined a number of tasks where they saw the potential of GenAI to enhance students' educational experience. For instance, teachers agreed that GenAI could be helpful for automating low-stakes, mundane tasks, e.g., spellchecking, fixing grammar, data entry, and producing filler texts for user interface design and prototyping; thus freeing up time for *"students to focus their attention on the creative aspects"* (T1). For coding tasks, T1 felt that students could use GenAI to debug syntax errors in their own codes and easily parse codes written by others *"by having it generate comments for different sections of the code."*

Teachers reflected on their own experience with GenAI tools to highlight areas where GenAI could come in handy and where their output fell short. T1, T3, T7, T8, and T9 used GenAI for personal tasks, while T7 and T8 had tried it for course preparation, such as writing a syllabus or lecture outlines, gathering reading materials, and finding additional resources on certain topics.

> T7: *"Being a person with ADHD (Attention Deficit Hyperactivity Disorder) and OCD (Obsessive Compulsive Disorder), it's very challenging for me to get started on certain tasks. So, I'll use generative AI to initiate tasks... I'll plug in the things that I need the syllabus to say. And it'll naturally spit out some word salad that partially makes sense, but it's certainly not what I intend to be read by my supervisor."*

Thus, while AI-generated content could be used as a *"starting point"* (T4), teachers cautioned that GenAI *"will never ever serve as the endpoint for anything"* (T7) and students must develop necessary skills to convert the generic and rudimentary content provided by GenAI into *"something that's actually good"* (T4).

For this reason, teachers expressed concerns about students' over-reliance on GenAI for academic tasks [32, 41, 107]. They highlighted that the goal of completing assignments for students is to engage with the materials themselves and understand it thoroughly. However, *"if you don't know it, because you copied it from somebody or from AI... you might be able to fool me. But someday you're gonna need to know this stuff,"* lamented T5. T8 echoed this sentiment, *"Because it's so easy and seductive... this is like a gateway drug to use it too much."* Additionally, T7 foregrounded that students' reliance on AI-generated responses that lacked *"real, experimental, imaginative ideations"* resulted in their *"creative muscle of imagination atrophying very, very easily. And then I find that students remain stagnant. They're not interested in expanding their knowledge base."* Hence, T7 was concerned about students' inability to handle critical real-life scenarios due to their over-reliance on GenAI.

> T7: *"When you encounter a scenario in real life professionally... where there actually is no answer that can be given by GenAI... if you haven't had the practice of creative thinking, analytical thinking... you'll be at a loss, and you'll be ineffective... because you relied so desperately and so diligently on GenAI."*

The perceived inability of GenAI to produce creative, human-centered content meant that teachers found it less likely that GenAI would disrupt learning outcomes in Humanities, Media Studies, or similar disciplines, given that students could not use GenAI to derive high-quality solutions for assignments in these courses. For example, T5 pointed out that ChatGPT *"cannot conduct a user test or qualitative analysis of people interacting in a space. Fortunately, [ChatGPT] can't fake that stuff too easily yet,"* because this work required a nuanced understanding of socio-material contexts. Likewise, highlighting the significance of interpretation of human behavior in his courses, T6 asserted, *"At least in my field, [ChatGPT] doesn't present a particular danger or fear... So it's easy for me to circumvent any use of it in my classes because it just can't do what I need students to do."*

Additionally, some teachers like T6 and T8 started redesigning their courses and assignments to account for the strengths and shortcomings of GenAI, not only to compel students to engage in critical and analytical thinking with the course materials but also to effectively use GenAI when appropriate. He said,

> T6: *"I need to redesign my assignments to focus on the learning objectives that have always been part of the assignment and allow the tool to do what it is designed to do... Rather than being fearful or worried that it will destroy what I do in class, I think about it as quite useful to streamline certain tasks and help with [identifying] analytical tasks that cannot be done by ChatGPT."*

T6 provided several examples of how he redesigned assignments to allow students to make the best use of GenAI, for example, to *"search through data, find a set of articles, and find a series of definitions."* He then encouraged students to analyze and synthesize the data curated by GenAI and apply relevant theories—tasks that he thought GenAI could not do effectively. For instance, in a course on Sound Studies, he redesigned an assignment that was initially about understanding the concept of 'reverb.' Since students could easily produce the definition of 'reverb' using GenAI, T6 modified the assignment to be about *"finding an example where it's (reverb) used in a critical way."* He commented that the updated assignment *"forced [students] to take the definitions they found and bring them into analytical work in the class."* Similarly, in a Psychology course, T8 reworked an assignment that was originally about comparing

and contrasting decision-making theories, since *"ChatGPT can do that pretty well. It knows theories."* Instead, her updated assignment asked students to describe a major decision in their lives and how they would change that decision based on relevant theories covered in the class. T8 explained, *"ChatGPT didn't take the class. It doesn't know this person's decision. So they're writing about something personal, and then applying that personal situation to the content that they've learned in class."* This shift in assignment design reflects how teachers have started making strategic adaptations to ensure that students are gaining intended learning objectives even if they use GenAI for certain tasks.

6.3 Teachers' Opinions on Scenarios and Statements about Students' GenAI Use

Below we present teachers' arguments and opinions regarding the usage scenarios (Table 3) and students' beliefs about GenAI (Table 4). Teachers' arguments primarily centered around preserving students' learning objectives and assessing their understanding of academic concepts.

All teachers except T7 and T8 supported the use of ChatGPT to double-check answers in weekly open-book quizzes (Scenario-1). T5, however, cautioned that GenAI might not always provide reliable facts due to known issues with inaccuracy and hallucination. T2 was comfortable about the undisclosed use of GenAI in this scenario because the student was not *"representing GPT's work as their own."* Conversely, T7 and T8 opposed the use of ChatGPT, because a quiz is created to assess a student's understanding of a particular concept, and using ChatGPT to check the answers might hamper that learning.

Five teachers supported using GenAI for code generation by prompting with pseudocode (Scenario-2), because they believed the student was using GenAI as a conversion tool to streamline the coding process, which was not hampering their learning. T4 highlighted the relevance of the student's major in determining the appropriateness of using GenAI in this scenario. He believed that for a student whose primary focus was not coding, e.g., those in Communication majors, utilizing ChatGPT to aid in coding tasks was acceptable if it was a supplementary aspect of their broader academic activities. However, T2 did not approve code generation from GenAI if the student had concealed GenAI assistance and misrepresented the code as their own work. T3, T4, and T8 expressed concerns about the potential negative impacts on learning objectives due to the student *"skipping necessary steps to understand how coding syntax works."*

All except T4 and T7 approved the use of GenAI to generate options for demographic questions (Scenario-3) because they thought that the student was using GenAI as a starting point. However, T4 and T7 pointed out that AI-generated content often reflected racist, sexist, and ableist biases [37, 69] and might suggest binary gender options which would not be reflective of inclusive practices in survey design [16].

All teachers supported students using GenAI to brainstorm ideas (Scenario-4). Nevertheless, T5 desired that students critically extend ChatGPT's ideas rather than solely relying on it. T9 similarly felt that students should *"try to brainstorm with different sources—ChatGPT, friend, teacher, TA."* T2 was supportive of using GenAI for brainstorming if that was disclosed so that the teacher could understand the student's thought process.

All teachers agreed on the usefulness of GenAI to clarify academic concepts (Scenario-5), but they also emphasized the importance of verifying AI-generated information.

All teachers opposed using ChatGPT to write an essay and paraphrasing it to hide GenAI assistance (Scenario-6), considering ethical concerns and violation of academic policy. T3 compared it with plagiarism i.e., *"getting an old version of an essay from someone and paraphrasing it."*

All teachers supported the student using GenAI as a guide and then modifying the AI-generated response to incorporate their own thoughts (Scenario-7). T2 and T5 did not express the need to disclose GenAI use here, because it was similar to *"looking at a textbook for guidance"* or *"asking a friend to look at it."*

Turning to students' beliefs about the impact of GenAI on their learning, six teachers agreed with GenAI enhancing understanding of academic concepts (Statement-1). They appreciated GenAI's capability to present tailored explanations catering to students' unique learning styles and preferences [8, 32, 69]. However, T3, T4, and T8 were concerned about potential inaccuracies in GenAI output, further diminishing students' learning gains. Six teachers agreed that GenAI could speed up students' workflow (Statement-2). However, T2, T4, and T5 felt that time spent verifying the accuracy of AI-generated responses could negate the time-saving benefits. Six teachers agreed that GenAI was similar to existing tools used for academic work (Statement-3), whereas T1, T2, and T9 did not support this statement due to the advanced capabilities of GenAI. Finally, four teachers conditionally agreed with Statement-4. T1 pointed out GenAI's inevitable presence in the industry and emphasized the need for domain-specific knowledge to use it effectively. T3, T4, T5, T8, and T9, however, argued against this statement. They believed overly relying on GenAI could be *"short-sighted"* and might impede skill development needed in real-world contexts. T5 explained, *"[If there's a] patient on the table, the clock is running, there's no time to go look up your textbook or ask ChatGPT for guidance. So you can't be like, 'I don't really need to know how to do this procedure because I'm gonna have ChatGPT explain it.'"* Overall, teachers' diverse opinions highlight the nuanced considerations they make regarding when to allow or not allow students' use of GenAI and the fraught boundaries of appropriate and ethical use of these tools in academic work.

7 Discussion

We analyze our findings to unpack students' undisclosed use of GenAI through the lens of cognitive dissonance and outline practical considerations to address such undisclosed use.

7.1 Unpacking Students' Non-disclosure of GenAI Use

In response to the concerns over academic integrity and diminished learning outcomes associated with the use of GenAI [32, 69], researchers have developed technical solutions to detect AI-assisted plagiarism [98]. However, these technical solutions have limitations, including inaccuracies and false positives [62, 71], leading to false accusations against students [29]. We argue that students'

Table 3: Academic tasks and use scenarios shared by the interviewed students. Seven scenarios (Scenario-#) were presented before the interviewed teachers to elicit their comments on whether or not they supported GenAI use in those scenarios.

Task categories	Students	Example usage scenarios	Teachers who supported	Teachers who did not support
Checking answers during open-book quizzes	S13	For weekly open-book quizzes in a course, Brian used ChatGPT to double-check his answers. (Scenario-1)	T1, T2, T3, T4, T5, T6, T9	T7, T8
Writing simple codes	S8, S11, S13	Adam used ChatGPT for simple coding assignments. He started by partially writing the code or providing pseudocode to ChatGPT, asking it to convert it into Python code. Afterward, he reviewed the code to check for logical errors. If there were none, he directly copied ChatGPT's response into his assignments. (Scenario-2)	T1, T5, T6, T7, T9	T2, T3, T4, T8
Performing research-related tasks	S7, S11, S13, S14	In the interview questions for a research project, Clara included a set of demographic questions with specific response options. She used ChatGPT to generate these options. (Scenario-3)	T1, T2, T3, T5, T6, T8, T9	T4, T7
Brainstorming ideas	S1, S3, S4, S5, S6, S10, S13	Dave used ChatGPT to brainstorm ideas for accounting projects. He quickly searched for topics on which he could base his project and then selected one that appealed to him. (Scenario-4)	All	None
Searching for information about academic concepts	S2, S4, S5, S6, S10, S14, S15	Whenever Elena and her group had a team project, they used ChatGPT to clarify things they didn't understand. They found that this approach enhanced their learning by providing information they were previously unfamiliar with. (Scenario-5)	All	None
Finding possible solutions to questions in assignments	S1, S3, S4, S6, S10, S11, S13, S15	Frank used ChatGPT to write essays for a course which strictly mentioned not to use ChatGPT. For this course, he never directly used the responses from ChatGPT. He carefully paraphrased ChatGPT responses to ensure his answers did not seem AI-generated. (Scenario-6)	None	All
Identifying key points to address in assignments	S3, S6	Frida used ChatGPT as a reference to identify the key points she needed to cover in an assignment. Using the insights provided by ChatGPT as a guide, she completed the assignment in her own words. (Scenario-7)	All	None
Writing research papers	S7, S11, S13	Sara used ChatGPT to edit the sections of her manuscript. Initially, she wrote a rough version of a section. After that, she copied and pasted the text into ChatGPT and asked it to paraphrase. Then, she used whatever ChatGPT generated by changing it a bit.	-	-
Debugging and optimizing code	S8, S9, S11, S12, S13, S14	Jessica used ChatGPT to assist with debugging her code. So, she inputted her written code snippets to ChatGPT and prompted it to identify which line of the code was generating the issue. She used the response from ChatGPT to fix the error in her code.	-	-
Getting a refresher on coding syntax	S7, S8, S9, S13, S14	Eric often forgot the syntax of 'foreach' loop in C#. So, he used ChatGPT to get a refresher on this coding syntax. He directly copied the syntax in his code. Then, whatever he needed to do inside the loop, he did it on his own.	-	-

Table 4: Teachers' opinion on the beliefs of interviewed students around the use of GenAI. Four statements (marked as Statement-#) were presented before the teachers to elicit their comments.

Statements	Teachers who agreed	Teachers who did not agree
GenAI tools like ChatGPT enhance students' understanding of academic concepts. (Statement-1)	T1, T2, T5, T6, T7, T9	T3, T4, T8
GenAI tools like ChatGPT speed up students' workflow and save them time. (Statement-2)	T1, T3, T6, T7, T8, T9	T2, T4, T5
Using GenAI tools like ChatGPT is similar to using tools like grammar or spell checker tools (e.g., Grammarly) or search engines (e.g., Google). (Statement-3)	T3, T4, T5, T6, T7, T8	T1, T2, T9
Students do not risk their learning gains by relying on GenAI tools like ChatGPT because they expect them to be available in professional environments. (Statement-4)	T1, T2, T6, T7	T3, T4, T5, T8, T9

inappropriate or undisclosed use of GenAI cannot be addressed with technical solutions only; rather we must adopt a sociotechnical approach by uncovering students' rationales and justifications behind why they are choosing to use GenAI when it is not allowed [2]. Below, we rethink our findings by applying the lens of cognitive dissonance [21], which has been previously used to explain people's contradictory beliefs and actions in other contexts, such as how people rationalize their unsatisfactory purchase decisions about smart home technology by seeking positive information about these tools [57] and how people evade feelings of displeasure by skipping opposing views on social media [36].

At its core, the notion of cognitive dissonance highlights the inconsistency between one's beliefs and their actions [36, 73, 94]. In our study, we found that students were cognizant of how using GenAI without disclosure might lead to academic misconduct [97, 111], including violation of course policies, instructors' disapproval,

and getting caught for plagiarism. They also recognized the negative impacts of GenAI on their learning gains [61, 87]. For example, S6 acknowledged not learning much in a course due to his over-reliance on GenAI for completing assignments. These realizations indicate the students' state of cognitive dissonance: On one hand, they held internalized beliefs that value honest academic effort and meaningful learning; on the other hand, their undisclosed GenAI use contradicted these beliefs by challenging their self-image as diligent learners.

Cognitive dissonance theory also helps us disentangle why—despite being fully aware of the potential negative impacts—students continued to use GenAI. The theory suggests that when dissonance arises, individuals become motivated to reduce their psychological discomfort by initiating a recovery process that centers on either changing actions to align with their beliefs or changing their beliefs to align with actions [57, 94]. Our analysis showed how students attempted to adjust their actions and beliefs to reduce their cognitive dissonance caused because of their undisclosed GenAI use. As part of *changing their actions based on their belief of policy violation*, they employed various strategies, ranging from multilayered paraphrasing of AI-generated content to restricting their use of GenAI merely as a guide if permitted by the instructors. For *changing their actions in response to their belief of diminishing learning outcomes*, some students limited their GenAI use to only low-stakes, mundane tasks that did not require critical or creative thinking. For example, S13 used GenAI to get a refresher on the coding syntax but performed the main functionalities in the code by himself to fulfill his learning objectives, which he might have otherwise not been able to achieve if he had relied on GenAI for the entire task. As part of *changing their actions based on their belief of limited acceptance of GenAI*, students restricted their disclosure of GenAI use to a select group of close and trusted peers. Finally, students *changed their beliefs to justify their actions of using GenAI without disclosing*. They rationalized their GenAI use by equating GenAI to other widely accepted tools and search engines (e.g., Grammarly, Google); anticipating its availability in future professional settings; citing (and sometimes assuming) its use among peers and teachers [29]; emphasizing the sense of relief gained through GenAI's help in releasing their academic pressure; and highlighting the necessity of GenAI to address the lack of high-quality learning resources.

However, the resolutions that students arrived at—both in terms of adjusting their actions and their beliefs—were often misguided. From a cognitive dissonance perspective, while these misguided behaviors may reduce short-term psychological discomfort, they can lead students to adopt ethically questionable practices and rely on inaccurate assumptions. For example, unlike students' belief, GenAI adoption in future workplaces remains uncertain due to many practical and ethical challenges [71, 97]. Likewise, although students equated GenAI to spellcheckers, coding platforms, or search engines, compared to these tools, GenAI's capabilities and impacts on education are magnified and far-reaching [32, 41, 69].

We call on educators and practitioners to develop interventions grounded in cognitive, empathetic, and ethical frameworks that might prompt students to critically examine their misguided behaviors and the long-term implications of GenAI use in academic work. For example, incorporating cognitive behavioral techniques into classroom activities might help students manage their thought processes driving dissonant behaviors and nudge them to adhere to academic norms [10, 59]. Empathy-based education could shift their focus from self-justification to moral considerations [17, 64]. Ethical grounding strategies could equip them to evaluate the moral implications of their decisions [77]. Such strategies could help students achieve internal consistency without resorting to actions or beliefs that compromise academic integrity and alleviate their psychological discomfort—rooted in cognitive dissonance—that currently drives them toward potentially unethical choices related to GenAI use. Likewise, while developing future AI-embedded educational technologies, designers should take into account students' emerging actions and beliefs that unfold as a way to cope with cognitive dissonance. A productive step in this regard could be integrating metacognitive support strategies into GenAI tools [92], which might enhance students' ability to monitor and control their thinking processes and help them in task decomposition rather than providing direct solutions to their questions.

7.2 Practical Considerations for GenAI Use in Academic Work

Prior work calls for promoting ethical norms around GenAI use through transparent disclosure practices, such as detailing when, how, and what prompts were used and how GenAI responses influenced the end results [20, 34, 44]. However, our study reveals that students often avoid disclosing their GenAI use, which exacerbates concerns about academic integrity. Below, we enumerate practical considerations for educators to foster students' ethical and transparent use of GenAI in academic practices [54, 91, 109].

7.2.1 ***Redesigning Academic Tasks.*** To ensure academic integrity, prior studies suggested reconsidering assessment practices at the course and curriculum level, for example, deliberately generating buggy code to guide students to find and fix errors [86], developing engaging assignments that would reduce mundane work for students [112], and incorporating assignments grounded in real-world practices [30]. Our analysis aligns with these suggestions and provides empirical evidence of how teachers identified tasks that students viewed as less valuable—based on their undisclosed use of GenAI—and how they subsequently redesigned these tasks to mitigate GenAI misuse. For example, T2's experience with students' undisclosed use of GenAI to answer certain questions served as indicators for him that students considered such tasks as less valuable, prompting him to redesign the assignment to focus on more meaningful tasks [112] (Section 6.1). Given this, we propose that teachers should redesign lesson plans by focusing on increasing the perceived value students place on various academic tasks [101]. They should explicitly articulate the learning objectives, practical applications, and personal and long-term benefits associated with each task while highlighting how reliance on GenAI could impede achieving those goals. For example, teachers could highlight the importance of completing coding assignments independently to learn how coding syntax works (Scenario-2), which has implications for students' long-term achievements e.g., succeeding in professional settings. By explaining and increasing the perceived value of certain tasks [101], teachers can motivate students to engage meaningfully and ethically in their academic work.

7.2.2 ***Reforming Students' Misguided Behaviors.*** Prior work revealed how using GenAI shapes students' self-regulation strategies, self-efficacy, and fear of failure [56] as well as their trust on GenAI for help-seeking [35]. Our findings extend this work that concerns with students' psychological patterns related to GenAI use by uncovering how students form misguided beliefs about the utility of GenAI and the actions they adopt to hide their GenAI use. To counter these misguided behaviors, teachers may introduce myth-debunking activities [48] into their curriculum to equip students with accurate information about GenAI capabilities. For instance, some students (S9, S11) believed their reliance on GenAI would not compromise their learning gains because they expect similar tools would be available in their future professional environments (Statement-4). Teachers might refute this misconception by discussing real-world scenarios where a thorough understanding and immediate recall of concepts are essential. T5, for instance, described a medical scenario where surgeons must make split-second decisions without relying on external tools like ChatGPT, highlighting the need for rigorous knowledge and expertise. Myth-debunking activities may draw on the "Black Mirror Writers Room" exercise [43], which has been successfully incorporated into computing classes to teach students about technology-related harms through speculative fictions.

7.2.3 ***Maintaining Transparency about Expected Use.*** Given the complexities in detecting AI-assisted plagiarism [62, 71], many teachers avoid directly confronting students due to the lack of concrete evidence, as our findings show. Nevertheless, students often face implicit consequences, including lower grades. Importantly, students may perform AI-assisted plagiarism unintentionally if guidelines about acceptable use are not clear to them. To address this, prior work suggested that teachers be transparent with their students by modeling acceptable use cases [9] and clarifying how AI assistance will factor into grading [53]. Our study corroborates these suggestions. We further underscore the need for transparency about expected use, given how different teachers' opinions on the acceptability of students' GenAI use vary across different scenarios. For instance, while T2, T3, T4, and T8 disapproved of the undisclosed use of GenAI for generating code from pseudocode (Scenario-2) due to concerns about diminished learning outcomes, others supported using GenAI in this scenario considering it as a simple conversion tool. As such, teachers should clearly communicate when disclosure of GenAI use is required as well as when it is acceptable not to disclose it [104]. Moreover, students who understand why certain actions are encouraged or discouraged are more likely to be intrinsically motivated to follow these policies [19]. Therefore, to help students better understand and adhere to these norms, teachers should clearly articulate not only *what* is expected from students but also *why* it is expected [19, 104].

7.2.4 ***Engaging in Reflective Conversation.*** Prior work called attention to integrating GenAI tools into the academic workflow by proposing guidelines for teachers [14, 31, 54, 91]. However, power imbalance in student-teacher dynamics can lead to students feeling disempowered and excessively monitored [80]. Luo [52, 53] underscored the need for communication about GenAI policies and guidelines to transition from a punitive to a more supportive and collaborative approach. This involves creating opportunities for teachers and students to jointly develop GenAI policies, assessment tasks, and standards. Our analysis also supports this collaborative approach, as we observed that students often keep their GenAI use undisclosed, even when such use might be acceptable to many teachers if it were openly shared. Both teachers and students can benefit from reflective and periodic conversations [26, 103] that would allow both parties to reflect on and learn from their positive and negative experiences with GenAI by facilitating open dialogue about what constitutes acceptable and ethical use [102]. Among our interviewees, T8 shared with her students how she leveraged GenAI for fixing typos as a dyslexic user, how she cited GenAI in her own work, and harms of over-reliance. We posit that teachers disclosing their GenAI use to students in this ways can enhance mutual trust and minimize students' (inaccurate) assumptions about teachers' GenAI use to justify their actions (Section 7.1).

7.3 Limitations and Future Work

An important limitation of our study is that many interviewees (seven out of nine teachers and five out of fifteen students) were affiliated with our university. Moreover, despite repeated tries, we were able to recruit only two female and three non-White teachers. Thus, our findings may not fully reflect the perspectives of students and teachers with diverse affiliations and backgrounds. Also, while we reminded participants of our data confidentiality and anonymity procedures to encourage candid answers, we acknowledge the possibility of social desirability bias in our data, given we relied on self-reported responses on a potentially sensitive topic [11]. Further, although our study provides some insights into teachers' use of GenAI, future work could systematically investigate whether or not teachers disclose GenAI use to their students and students' thoughts about teachers' GenAI use. This could complement our findings and provide new avenues for promoting mutual transparency and reflective conversation, as discussed in Section 7.2.4.

8 Conclusion

Through our exploration into the perspectives of students and teachers on undisclosed GenAI use, we capture an in-depth empirical understanding of the multifaceted strategies students adopt to hide their GenAI use in academic work as well as how teachers detect and manage such undisclosed use. We uncover several misguided beliefs students adopt to justify their undisclosed use through the lens of cognitive dissonance. Consequently, our analysis discusses practical considerations, such as redesigning academic tasks, nudging students to reform their misguided beliefs, maintaining transparency, and engaging in reflective conversation. Overall, to promote the ethical use of GenAI in academic work, we call for reevaluation of existing academic practices around GenAI and foster a more collaborative approach.

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A Participant Demographics

Table 5: Survey respondents' (n=97) demographic information on an aggregate level. All are college students.

Gender	Count
Male	54
Female	36
Non-binary	3
Not disclosed	4

Ongoing Degree Program	Count
Associate Degree	5
Bachelor's Degree	37
Master's Degree	28
Doctoral Degree	27

Race	Count
White	23
Black	32
Hispanic	6
Asian	25
Not disclosed	11

Table 6: Details of interviewed college students (n=15).

ID	Ongoing Degree Program	Major	GenAI Tools Used
S1	Bachelor's Degree	Accounting	ChatGPT 3.5
S2	Bachelor's Degree	Economics	ChatGPT 3.5
S3	Bachelor's Degree	Finance	ChatGPT 3.5
S4	Bachelor's Degree	Computer Science	ChatGPT 3.5
S5	Bachelor's Degree	Economics	ChatGPT 3.5
S6	Bachelor's Degree	Civil Engineering	Google Gemini, ChatGPT 3.5
S7	Master's Degree	Information Technology	ChatGPT 3.5
S8	Master's Degree	Computer Science	ChatGPT 4.0
S9	Master's Degree	Computer Science	ChatGPT 3.5
S10	Master's Degree	Mathematics	ChatGPT 3.5
S11	Doctoral Degree	Computational Biology	ChatGPT 4.0, Google Gemini
S12	Doctoral Degree	Physics	ChatGPT 3.5, Microsoft Copilot
S13	Doctoral Degree	Computer Science	ChatGPT 3.5
S14	Doctoral Degree	Computational Biology	ChatGPT 4.0
S15	Doctoral Degree	Mathematics	ChatGPT 3.5

Table 7: Details of interviewed teachers (n=9).

ID	Position	Major of Students Taught	Degree Level of Students
T1	Lecturer	Computer Science	Masters
T2	Lecturer	Computer Science	Undergraduate
T3	Assistant Teaching Professor	Communication Studies, Business Studies, Computer Science	Undergraduate
T4	Assistant Teaching Professor	Communication Studies, Business Studies	Undergraduate
T5	Assistant Teaching Professor	Computer Science, Mechanical Engineering, Psychology	Undergraduate, Masters, PhD
T6	Associate Teaching Professor	Communication Studies, Media and Screen Studies, Music, Law, Business	Undergraduate
T7	Associate Teaching Professor	Humanities, Art and Design	Undergraduate
T8	Assistant Professor	Computer Science, Psychology	Undergraduate, Masters, PhD
T9	Assistant Professor	Educational Technology	Masters, PhD