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Does the GenAI Platform Matter? High-School Students' Perceptions of Generative AI's Academic Impact

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ABSTRACT

The rapid integration of GenAI (Generative AI) into high school education has emphasized the need to improve current understanding of its pedagogical role. This paper aimed to explore how the brand of GenAI used is associated with students' perceived academic impact. A survey (n=114) was conducted to determine the extent of this relationship, and if one exists. A composite perceived impact score was derived by averaging Likert scale responses to perceived impact questions (α=.874). This was utilized to conduct a regression analysis that demonstrated relationships between several independent variables and students' composite perceived impact. P-values for GenAI brands exceeded the threshold (p>.05), resulting in the lack of statistically-backed conclusion on the relationship between the students' perceived impact of GenAI on students' academic experience and the platform of GenAI. The new understanding of this study is that students' GenAI competency and GenAI usage is associated with their perceived impact. This study's findings were consistent with previous research and fulfilled a gap in understanding competency as a factor influencing student perceived impact. Overall, this study expanded the current understanding of factors associated with high school students' perception of GenAI and clarified students' perceptions of GenAI's role in high school education without integrating a theoretical model.

INTRODUCTION

The evolution of neural networks into modern society has proven inevitable; specifically, the emergence of large language models (LLMs) has accelerated the blending of digital and physical modes of teaching within learning environments. Laurie Harris from the Library of Congress (2025) defines generative AI (GenAI) as superior to traditional AI models and contingent upon neural networks to learn patterns that allow it to generate new content. It recognizes patterns through neural networks to formulate a response to prompts (2025). LLMs have seen substantial growth, highlighted by the copious growth of the prevalent LLM, ChatGPT. Andy Opel, professor of communications at Florida State University, states, "The fall of 2022 introduced profound changes to the world with the release of OpenAI's ChatGPT. Five days later, over a million users had registered for access, marking the fastest diffusion of a new technology ever recorded" (as cited in Anderson & Rainie, 2023). Furthermore, the integration of GenAI within education

has introduced profound impacts. A recent study conducted by Utah State University's Brayan Diaz (2025) showed that class performance declined after ChatGPT was introduced (Diaz et al., 2025). On the other hand, similar studies in the field have also found the reverse association. These two opposite relationships indicate an incompleteness of the etiology of GenAI's impact on students and the factors influencing this. Previous studies have shown that AI has both the potential to empower academic success or be pernicious, accentuating the importance of understanding the potential of AI before integrating it within education.

GenAI has an expanding role beyond just engineering education. Its capabilities catalyze its application within various fields. However, as the role of GenAI grows, it creates a trade-off between using it to increase efficiency and the overreliance users may develop. In an analysis of perceptions of AI in medical education, Bachelor of Medicine and Surgery Abdul Sami (2025) and colleagues found a tradeoff between AI use and its impact on academic performance. Specifically, medical students discovered that, while AI increased study efficiency and supplied understanding, it also led to a growing fear of being replaced by AI and concerns about fostering overreliance (Sami et al., 2025). When implementing GenAI in high schools, it's important to assess its risks and benefits to attain the best benefit, especially when it would be presented as a supplemental learning tool.

Historically, schools around the nation have restricted student access both to external GenAI tools and to the internet to prevent misuse by students and the development of sciolism. At the same time, many of these schools have now introduced monitored access to GenAI and incorporated it within learning systems, accentuating a shift from GenAI intolerance to authorizing use. This is shown through Securly, a content blocker used nationwide by schools that has historically been known for anti-AI restriction. Concurrently, this same tool now allows student access to Securly AI, a GenAI tool created by the same company. This emphasizes that GenAI has a growing presence within student lives and demands a higher understanding before broader use. Moreover, GenAI use is not exclusive to students; educators around the nation have also begun to utilize GenAI tools to plan their lessons. Soon, the integration of GenAI within classrooms may become an increasing reality through increased GenAI innovations. There exists a lack of knowledge about GenAI's role in education, especially among students. This paper aims to explore whether the specific GenAI platform used is associated with students' perceived impact, expanding upon the current limited body of knowledge.

LITERATURE REVIEW

GenAI presence in high school education

The integration of GenAI into education is imminent. When considering its applications and user majority, there is an abundance of targeting towards teens and students. Groups of teens in differing geographic regions and contexts reflect a mutual trend: rising GenAI use. Olivia Sidoti, a research analyst at the Pew Research Center (2025), and colleagues state that GenAI usage for schoolwork in 2024 has peaked to 26%, a 13% increase since 2023, illustrating its broad integration among teens (Sidoti et al.,

2025). With a 100% increase within a year, the substantial increase emphasizes a greater need to understand the factors influencing this trend. Moreover, Collegeboard (2025), a well-known scholarly organization known for its standardized tests, adds on to this rising trend by showing the extent it has gone in high school education: "The percentage of high school students who report using GenAI tools for schoolwork is growing, increasing from 79% to 84% between January and May 2025" (Collegeboard, 2025). Collegeboard and Pew Research focus on different aspects of GenAI use; Collegeboard focuses on AP students use of GenAI, while Pew Research centers on general teen use of AI for schoolwork. Although they focus on different populations and time periods, they both highlight the rapidly increasing popularity of GenAI across diverse areas. Its high usage rate within a short period is uncommon for similar new technologies, emphasizing the fast paced growth of GenAI use among teens, and raising questions about the social factors driving its growth. Overall, current literature emphasizes widespread adoption by high school students and teens, driving GenAI use rates up and raising a gap in understanding factors driving GenAI's appeal to teens.

Pedagogical role of GenAI

In addition to being prevalent throughout high schools, GenAI has a pedagogical function that enhances its growth. Gwo-Jen Hwang, a Chair Professor and a prominent researcher, and colleagues (2025) found that critical thinking scores were substantially different between an experimental group with ChatGPT-integrated lessons and a control group without; the experimental group had a mean rank 15 higher than the control group. Additionally, in terms of problem-solving, the experimental group had a mean rank of 9.42 higher than the control group (Hwang et al., 2025). The differences in mean ranks indicate that when GenAI has a defined pedagogical role in classrooms, it enhances students' abilities. This data contributes to the lack of understanding of GenAI by emphasizing how it can boost students' critical and problem-solving skills at a similar rate to traditional educators. On the contrary, Manuela Farinosi and Claudio Melchior from the University of Udine (2025) found that GenAI has a limited pedagogical role in education. Whereas, Hwang argues the effectiveness of GenAI as a teacher supplement, Farinosi argues that GenAI can enhance learning with a high risk of harming students' learning and development. Farinosi notes that only 6% of teachers reported using GenAI in classrooms, highlighting a differing perspective: that GenAI has a limited pedagogical role in classrooms due to its novelty (Farinosi & Melchior, 2025). Farinosi's narrow approach limits his ability to emphasize the factors that influence academic performance changes with GenAI, emphasizing an information gap. Moreover, because Farinosi and Hwang's differ in perspective and geographical region , they introduce a gap in understanding how perceptions of GenAI may change across regions.

GenAI impact on student performance

GenAI has demonstrated a volatile relationship with student performance. Anna Huang (2025) and colleagues from National Central University conducted a study using GenAI in an introductory Python programming course. Huang's findings align with Hwang's by demonstrating a similar positive association; students who had access to the GenAI coding assistant had a positive mean difference score of 17.11, higher than those who didn't (Huang et al., 2025). Huang supplements previous literature by demonstrating GenAI's educational impact. She highlights that GenAI has the potential to positively

impact students and may outperform human instruction. She adds on to previous literature through mean tests that display GenAI as a potential innovative tool to transform education. However, Huang's study only demonstrates this impact in Taiwan; this points towards a gap in understanding how humans and GenAI would compare domestically. Moreover, Son Ha Xuan and colleagues amplify Huang and Hwang's observed effects by introducing school resources as an important factor in determining GenAI impact. Xuan found that in lower-funded public schools, GenAI-assisted teaching yielded 2.59 points lower on a 100 point scale than instructor teaching, while in private schools yielding the opposite result, GenAI-assisted teaching yielded .70 points on a 100 point scale greater than traditional instructor teaching (Xuan et al., 2025). They demonstrate that the school type is an important factor to take into consideration, and broaden the intricacies concerning GenAI's effect in educational settings. Their findings show that GenAI can be more effective or less effective than traditional teacher-only instruction, aligning with Huang and Farinosi's findings and accentuating the illustrated relationship. Studies exploring GenAI's relationship with student performance demonstrate its extreme dependency on surrounding demographic factors. Overall, GenAI has a measurable impact on student performance that is comparable to traditional teacher instruction.

Perceived impact

Perceived impact is how the influence of something is viewed. When considering how the application of GenAI may affect high school students' academic performance, perceived impact excels in its association with usage patterns. In an investigation in Palestine by Khlaif, faculty of Humanities and Educational Sciences, and colleagues (2025), they found that GenAI competency has a substantial negative association with students' perceived impact: the more competent students are with GenAI, the more negative their perceived impact (Khlaif et al., 2025). Heil et al. found a contrary result: AI competency enhances perceptions. Specifically, Heil, a renowned scholar from the University of Mannheim, and colleagues found a weak-to-moderate positive correlation between students' AI competence and perceptions of GenAI tools (Heil et al., 2025). This highlights the complexities of GenAI in education and how regional and methodological differences may alter results. These two contrary findings highlight a gap in understanding GenAI in education, particularly how it would fare across high school settings with differing competency levels. Moreover, a study by Jebasingh and colleagues (2025) found that students utilized GenAI to help them complete academic tasks faster, which enhanced their perception of GenAI's ability to reduce stress; therefore, students expressed an overall positive perception of GenAI's academic impact (Jebasingh et al., 2025). This study similarly clarified a focus on higher education or a specific discipline. It points towards a factor that was disregarded: GenAI's ability to reduce stress. More generally, students can use GenAI to increase their task efficiency and lower their workload, thereby lowering their stress. This connects to the overreliance previously shown by colleagues and expands upon it by suggesting factors influencing its formation. The literature review explored different aspects of students' perceived impact of GenAI and found several influencing factors. It persistently fails to address demographic factors' influence on students' perceptions of GenAI.

Comparison of GenAI

GenAI comes in many models and brands. Newer models have significantly higher computing power than the previous, while different GenAI brands offer varying strengths and weaknesses that are essential to consider. A study done by Yasin Celal Güneş from the clinic of radiology and colleagues (2025) found that differences between brands and models of GenAI exist, specifically in reference accuracy and fabrication rates. "Claude 3.5 Sonnet demonstrated the highest reference accuracy, with 80.8% accurate references (RAS 4) and a fabrication rate of 3.1%, significantly outperforming all other models" (Güneş et al., 2026). Güneş not only emphasizes that GenAI differ in accuracy and hallucination, but also that this variance is to a large degree. Showcasing the varying accuracy levels of GenAI, this study develops a gap in understanding how these results translate into real-world educational impact. Moreover, GenAI comes with many limitations that are hard to ignore. Nitin Naik, PhD in computer science and colleagues (2024), ran a Winograd Schema Challenge Test, a test for GenAI intelligence, and found that both Gemini and ChatGPT failed, marking their current capabilities as "not truly intelligent" (Naik et al., 2024). This study supplements the previous study by also highlighting hallucination as a major limitation of GenAI. When considering the incorporation of GenAI into high school education, it's important to factor in shared weaknesses across differing models to assess the risks and benefits of resource allocation. These two studies connect to form a gap in the limited knowledge of how different GenAI models, considering the weaknesses observed, may influence perceived academic performance.

Overall, the current literature shows a limited understanding of GenAI's impact in education and the factors that influence its results. Despite multitudinousness in studies investigating GenAI in various academic contexts, a paucity of research focuses on the context of U.S. high school students. Previous research has demonstrated that GenAI brands vary in their capabilities and that GenAI usage factors are associated with students' perceived impact; However, previous research has studied these associations in isolation. There are gaps in investigation that synthesize the relationship between GenAI platforms and students' perceived impact without integrating them into theoretical frameworks.

RESEARCH QUESTION

The following question will be answered in this research study:
To what extent is students' primary GenAI platform associated with their perceived academic impact of GenAI at High School X?

The primary hypothesis: Students who report ChatGPT as their primary GenAI platform will be associated with a positively higher perceived academic performance than students who primarily use a different platform.

METHODOLOGY

In light of determining if the brand of GenAI used by students influences their perceived academic impact, a non-experimental, quantitative method approach was utilized. A non-experimental quantitative method approach is derived from quantitative data collected through Likert scale questionnaires; participants rate whether they agree or disagree with statements on a five-point Likert scale (Sullivan & Artino, 2013). Likert statements were utilized to gauge the perceived impact of students through averaging scores. The researcher chose this method because it was optimal for the later data analysis to highlight relationships. Furthermore, this method was chosen due to its effectiveness in measuring students' beliefs about their primary GenAI platform used, which would prove crucial in demonstrating the relationship between the brand used and perceived academic impact. Data was collected utilizing a Google Forms survey, which was chosen for its user-friendliness and familiarity to participants, ultimately promoting higher student participation. The survey was distributed to students in classes pertaining to instructors X, Y, and Z. Students in these instructors' classes were selected to present a varying level of class rigor, allowing for higher generalizability. Students were selected from three random classes that each instructor teaches.

Instructor X teaches Advanced Placement (AP) Calculus BC, Multivariable Calculus, and Discrete Mathematics, which are all rigorous mathematics courses. Alternatively, Instructor Y teaches AP Computer Science Principles, an introductory course to computer science. Conversely, Instructor Z teaches AP Biology, a college-level introductory course to biology. AP classes are known to vary in coursework difficulty and demands. Sampling distinct AP courses with different academic demands allows the questionnaire to determine whether academic rigor was associated with higher perceived GenAI impact. Moreover, surveying multiple classes improves the generalizability of data. The target population for the questionnaire was a diverse age group of students from High School X, ranging from 14 to 18 years old. Due to the academic nature of this topic, participant names and email addresses were not collected. The study was conducted anonymously to encourage student participation and respect participant privacy.

Inclusion Criteria

Inclusion criteria for participants were: (1) be a student at High School X; (2) did not opt-out of the survey using the opt-out form; (3) answered yes to the first question of the survey, which asked if the student understood their rights as a participant and the confidentiality of the survey; (4) be a current student of instructor X, Y, Z; (5) answer all questions in the survey (GPA and economic status and usage frequency were not considered)

Procedure:

The researcher visited three classes for each instructor and handed opt-out forms to each student. Students were then given two weeks to have their parents complete their opt-out form if their parents didn't wish for their child to participate. Students who didn't opt out were then sent the survey link by their teacher. The questionnaire consisted of 28 questions consisting of Likert scale multiple-choice questions and

open-ended questions. Responses were scored from 1 to 5, where "Strongly Agree" represented a 5, "Agree" represented a 4, "Neutral" represented a 3, "Disagree" represented a 2, and "Strongly Disagree" represented a 1. Students were initially asked if they used generative AI for schoolwork; this was done to sort participants into separate groups for a regression analysis. Students were sent to different parts of the survey based on their responses to this question. Non-GenAI users were asked about past usage of GenAI. From this group of participants, those who said "No" were sent to the end of the survey. Alternatively, those who answered "Yes" were asked similar questions to GenAI users. They were both asked to compare their GenAI usage frequency across different models. This was done to display the frequency of the primary GenAI and also show any potential relationships between usage frequency and perceived impact. Moreover, they were also asked about their GenAI literacy to demonstrate how reliable responses may be, and to show the dynamics of class rigor, frequency of use, and competency of AI, and the relation of these aspects. Then, participants were asked about their perceptions of their primary GenAI to gauge their perceived impact. Participants were then directed to the demographic portion of the survey. In the demographic section of the survey, traditional demographics, including grade level, gender, and race, were collected alongside average weighted GPA, economic status, and which instructor(s) the student has had. This was collected to illustrate any relationships between demographics and GenAI use and to provide additional variables to test for in the regression analysis.

Excel was used to convert Likert answer responses to numerical values for later data and sorting. Furthermore, Excel's regression analysis tool was used to conduct a regression analysis on students who use GenAI for schoolwork. A composite perceived impact score was created by averaging the Likert scores of question 17 for participants who use GenAI and question 21 for participants who don't use GenAI. Both questions had 3 Likert-scale items and were identical. The 3 Likert items measured differing aspects of students' perceived impact of their primary GenAI platform. Cronbach's α was calculated using the formula from Figure 1, where A equals the sum of the item variances, B equals the variance of the sum of the perceived impact score, and K equals the number of perceived impact questions. Using the perceived impact score, the researcher ran a regression analysis model that showed the relationships between independent variables and the composite perceived impact score. This composite score was created because it was optimal for a multivariable regression analysis, allowing for an uncongested data table that fulfills the purpose of this investigation. Reverse coding was not utilized in this investigation. Seniors were used as the reference category for grade level due to their higher age range, serving as the optimal control.; male students were used as the reference category for gender due to a majority of respondents being male. ChatGPT users served as the reference category to compare GenAI platforms due to its historical usage popularity across previous studies. Responses that did not pick Gemini or ChatGPT for the primary GenAI were absorbed into the "other GenAI" category due to insufficient observation numbers. This method allowed the investigation to transcend a sole exploration of the relationship between the GenAI platform and students' perceived impact. Students could be in more than one instructor category due to the possibility of having more than one instructor. This model was initially only conducted on GenAI users to illustrate different relationships between independent variables and the

perceived impact score. P-values[1] and B coefficients[2] were calculated by the model. P-values less than .05 were the target score to indicate a significant variable.

Figure 1: *Desmos Calculations for Cronbach's Alpha*

$$\frac{k}{k-1}\left(1-\frac{A}{B}\right)$$

(see Appendix D).

Ethics and Consent:

This investigation was conducted on minors ranging from 14 to 18 years old. Preceding the investigation, a research proposal was reviewed and received approval by the AP Research teacher overseeing the investigation and by the principal of High School X. Students were provided with opt-out forms and students' parents were given a two week period to opt-out their students. Students who did not opt-out, and provided their assent were then provided with the survey link and encouraged to complete the survey. Throughout the survey participants were notified that the study was voluntary, its anonymity and the ability to opt-out at any time; participants were also guided towards supplemental information on the study, and counseling resources. Survey data were stored in a confidential Google Sheets spreadsheet accessible only to the researcher. Participants' names, email addresses, and directly identifiable information were not collected in this study to protect respondent identity.

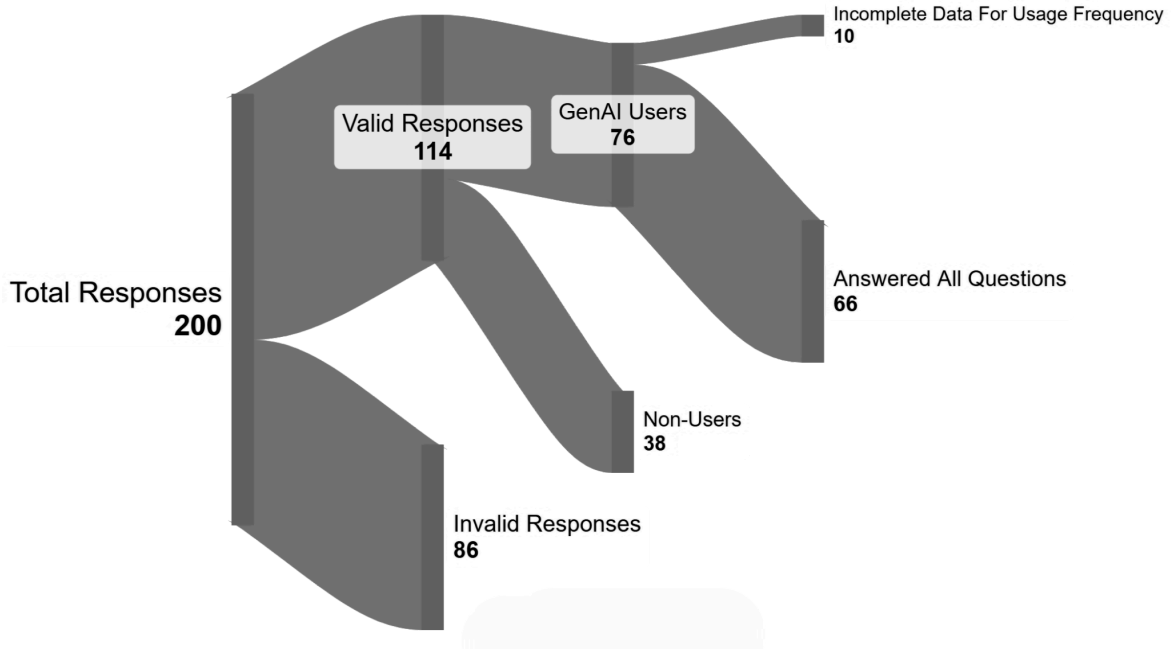
RESULTS

The study garnered a total of 200 participants, which was reduced to 114 after the sorting process according to the inclusion criteria. Figure 2 displays participant inclusion and exclusion from the initial 200 survey participants. Due to some GenAI-using participants having incomplete usage frequency data, they were excluded from the initial analysis conducted only on participants who use GenAI for schoolwork, where frequency was a variable analyzed, but reincluded in the all participants regression analysis. This maximized response count while also ensuring complete data for variables being tested.

[1] P-Value: a measure of the probability that the result obtained occurred through random chance.less than .05 is widely considered an acceptable value for rejecting the null hypothesis

[2] B Coefficient: a measure of the change in the dependent variable for every 1 value change in the independent variable

Figure 2: *Participant Flow Chart*



Initial findings showed that 66.7% of participants (n=76) reported using GenAI for schoolwork. Moreover, 100% of the population surveyed indicated using GenAI to some extent in the past. A multivariable linear regression analysis was then conducted solely on GenAI users (n=66). Results from the analysis show that the regression model was statistically significant (Significance F<.05). However, this significance is limited as the model explains only 12.1% of the total variance, indicating that a majority of the results are unaccounted for by the regression model and lowering the implications that can be derived. Nevertheless, Cronbach's α was calculated to be .874, which is considered statistically acceptable within the context of this investigation and indicates that the composite perceived impact scores are mostly representative of the individual perceived impact scores. Demographic information was mostly disregarded due to a lack of responses and because it diverged from the goals of this investigation

Observations	Significance F[3]	Adjusted R-Square	Cronbach's α
66	0.018	0.121	0.874

Table 1: Regression Statistic Results for GenAI Users

Variables	Intercept	Competency	Usage Frequency	Gemini	Other GenAI
Coefficients	1.590	0.306	0.175	-0.272	0.056
P-value	0.006	0.009	0.240	0.334	0.859

Table 2: Regression Statistical Significance and Coefficients for GenAI Users
Note. ChatGPT served as the reference category for the GenAI platform.

Table 1 includes the results from the regression analysis conducted on GenAI users. When comparing GenAI platforms, it's unclear whether the brand influences students' perceived impact due to p-values greater than .05. Competency was a statistically significant variable every one point increase in competency of GenAI was associated with .3 likert scale points higher perceived impact score than those who were not (B=0.306, 95% CI [0.084, 0.528], p<.05). Usage frequency does not demonstrate a statistically significant relationship with students' perceived impact. Thus, competency was the only significant impacting variable derived from the initial analysis. Due to the statistically insignificant results obtained from the previous regression analysis and finding that all students who do not use GenAI for schoolwork reported using GenAI in the past, all participants were considered GenAI users to an extent. A second regression analysis was conducted on all participants who met the inclusion criteria in order to identify a statistically significant association; this was not planned ahead, but aimed to expand upon the findings. Non-GenAI users' primary GenAI was asked in question 20 of the survey and grouped with GenAI users' primary platform of GenAI to increase the observation amount to 114. Dummy coding was used whenever Likert scale conversion was not possible; participants who use GenAI were coded as a 1 and participants who didn't were coded as a 0; Non-GenAI users served as the reference category for GenAI usage. In the second regression analysis, responses that did not pick ChatGPT, Gemini, or Grok were absorbed into the "Other GenAI" category; combining all participants allowed for a sufficient observation number to include Grok as an individual category. These were then used to compare against the perceived impact, the dependent variable, and ultimately derive more significant results.

Observation	Significance F	Adjusted R Squared	Cronbach's α
114	<.001	0.189	0.874

[3] Significance F: Tests how accurately the model fits the data without any independent variable

Table 3: Regression Statistic Results for All Participants

Variables	Intercept	GenAI Users	Gemini	Grok	Other GenAI	Instructor Y	Instructor Z	Instructor X
Coefficients	2.316	0.526	-0.208	0.179	-0.107	0.849	0.357	0.230
P-value	<.001	0.004	0.358	0.624	0.730	0.003	0.162	0.369

Table 4: Regression Statistical Significance and Coefficients for All Participants
Note. Non-GenAI users served as the reference category for GenAI usage, while ChatGPT served as the reference category for the GenAI platform.

When examining the results from the secondary regression analysis conducted on all participants, there is no statistically significant association of the GenAI platform and perceived impact due to high p-values ($p>.05$). Simultaneously, data indicates that students who do use GenAI for schoolwork are associated with a higher perception of GenAI's impact as .52 likert scale points higher than students who don't, a statistically significant relationship ($B=0.526$, 95% CI [0.181, 0.871], $p<.05$). Furthermore, students in instructor Y's class had the greatest change in perceived impact compared to other significant predictors ($B=0.849$, 95% CI [0.296, 1.402], $p<.05$). Other classes did not produce statistically significant associations due to p-values exceeding the threshold ($p>.05$). The main hypothesis for this study was: Students who report ChatGPT as their GenAI platform will be associated with the highest perception of its impact on their academic performance than students who primarily use a different platform. The null hypothesis was: There is no relationship between perceived academic performance and students' primary GenAI platform. The results from this study lack sufficient grounding to support the primary hypothesis based on sampled individuals and also fail to reject the null hypothesis due to insignificant p-values.

DISCUSSION

Researchers have explored the impact of GenAI on academic performance and perceived value scores, but few have considered the specific GenAI brand as an influential factor. This study aimed to compare different GenAI platform's relationship with students' perceived impact. First, the survey conducted on students at High School X showed that GenAI has a growing presence in educational settings, 66.7% of students surveyed (n=76) use GenAI for schoolwork, while 100% of students surveyed (n=114) have used GenAI before, highlighting homogenous exposure of GenAI. This finding emphasizes the prevalence of GenAI in high schools; it aligns with Collegeboard, with similarly high levels of GenAI usage (Collegeboard 2025). Moreover, the primary GenAI used by students was High School X, being used by 69.7% of students who use GenAI for schoolwork (n=53). This is important to consider because ChatGPT

served as the control group for the regression analysis. The overwhelming student population that uses ChatGPT as their primary GenAI may be due to its accessibility, brand image, familiarity, social influence, or ease of use. This aligns with Sidoti et al., who highlighted that 79% of teens had heard of ChatGPT, highlighting a continuing trend of ChatGPT's surging popularity (Sidoti et al., 2024). Moreover, because instructor Y's students may be because they fundamentally differ from other participants in subject area, assignment type, familiarity with technology, teacher expectations, or other unmeasured factors from other instructors' classes, it is implausible to make a definitive conclusion from this finding alone.

Analyzing the effect of the GenAI platform in regression analyses demonstrates some variance in perceived impact scores, as highlighted by B coefficients. Nevertheless, this variance is statistically insignificant ($p>.05$), which emphasizes the high probability of the result occurring by random. This, in turn, fails to demonstrate a statistically-backed relationship between the GenAI platform and perceived impact. Nevertheless, there was some variance in the B coefficients highlighting varying effect sizes due to the GenAI brand's impact. Both regression analytics found statistically significant variables, specifically, competency and GenAI usage ($p>.05$). The statistically significant findings, being both in the association found with both competency and usage, fulfill a gap in understanding factors influencing GenAI perceptions of U.S. high school students, an area that remains underexplored. The new understanding is that students' perceptions are associated with students' usage of GenAI and skill level in using GenAI. This new understanding rejects Khlaif et al.'s findings; they found that skill level had a negative association with students' perceived impact and actual performance (Khlaif et al., 2025). Moreover, this inconsistency was likely caused by a difference in demographic representation, regional differences, and a difference in the educational level of the area of focus. Instead, this finding is consistent with Heil et al.'s findings, which also highlighted a direct positive correlation between GenAI competency and perception of GenAI (Heil et al., 2025). The new understanding resolves a gap in understanding student perception of GenAI by establishing the role of competency in high school education, clarifying results from previous findings. Furthermore, this new understanding underscores the role that demographics play in students' perceived impact of GenAI and the intricacies between GenAI's pedagogical role across regions.

LIMITATIONS

While this presented new findings, there are some limitations to consider. Specifically, because this study surveyed 114 participants (~5%) of the school population using non-random sampling for specific classes and surveying only students at High School X, this study is only generalizable to students in similar AP classes as those surveyed, and cannot be generalized to a broader population size. Additionally, students were selected from three random classes that each instructor teaches, consequently lowering the generalizability of this study. Furthermore, because the participants were made up of high school students, responses may not be fully representative of students' actual usage and perceptions due to possible distrust in confidentiality and anonymity, in a particularly sensitive topic, presenting response bias; this

response bias may also extend to the social context of High School X and other unmeasured factors resulting in biased data. Additionally, rounding errors that may have occurred in the composite score creation process, and only using three questions to measure perceived impact, may hinder the reliability of this study. Measuring perceived impact emerges as a significant limitation; students' perceptions of how GenAI impacts them may differ substantially from the true impact of GenAI, if shown in objective changes such as grades and numerical performance; therefore, it is difficult to gauge how GenAI impacts students' academic success. Moreover, low observation amounts for most GenAI, and the conjoining of low response GenAI into the "Other" category results in an analysis that is not fully representative of all GenAI platforms as a whole. Survey order bias may also lower the generalizability of this study, the specific way that survey items were ordered may influence the responses received by participants. Furthermore, during the preliminary sorting process, 86 student responses were excluded for failure to meet selection criteria. Of those 86 students, were all the freshmen who completed the survey, resulting in an analysis that excluded freshmen, hindering the generalizability and raising concerns about the quality of responses received. Additionally, because a majority of the student population at High School X is caucasian and affluent, data may not be representative of all races lowering generalizability. Moreover, the lack of participants resulted in collapsing tail categories, hindering the results of the regression analysis.

IMPLICATIONS

There are many implications to consider in this study. The findings show that being knowledgeable in using GenAI will increase students' perceived impact. Students can prioritize increasing their skill level at using GenAI rather than focusing on choosing the correct one to maximize their perceived impact. This paves the way for future schools and school boards to supplement GenAI tools for students with proper training on how to use the tool to attain the best results by ensuring that students can see the value it beholds. Furthermore, schools should provide students with resources for ethical GenAI use in addition to guides to using generative AI to prevent students from developing overreliance on GenAI and negating their learning. Frequent GenAI users tend to develop overreliance and this poses an increasing risk as GenAI use grows. By allocating resources towards these subsets of people, schools can ensure students are retaining their educational integrity and effectiveness. Furthermore, the result shows signs of high perceived impact across AP classes, accentuating the need for proper GenAI implementation. Students having readily available access to GenAI without proper training may be associated with future overreliance, which, as a result, may be linked to higher perceived impact. This finding shows that it's important to assess the risks and benefits resulting from GenAI use, and to create a system of balance between AI use and educational attainment through sufficient educational resources to teach reliable GenAI use.

FUTURE RESEARCH

Future research should focus on exploring GenAI's actual effect on academic performance rather than its perceived impact. This would give more insight into how different GenAI impacts students' academic performance. Furthermore, future research should aim to address the gaps in this study by increasing participant size, which may improve statistical power, randomly selecting students, which would improve generalizability, and testing for additional independent variables to explain how GenAI impacts academic performance. Moreover, future research should also include qualitative questions to explain the quantitative results. Another possible direction would be to test independent pretest and post-test score differences for students using different GenAI, which would lessen the research gap by providing more conclusive evidence of GenAI's relationship with students' direct academic performance, and to test the impact of GenAI over a longer period of time to yield more conclusive results to supplement this. Furthermore, because data only explained a minute amount of the variance, future research should focus on exploring other factors that influence students' perceived impact to find the variables with the greatest impact.

CONCLUSION

Initially, this research sought to explore the underlying effects of the GenAI brand on students' perceived educational impact. The survey initially garnered 200 responses. After the sorting and analysis, this study did not find a statistically significant relationship between the specific GenAI platform and students' academic perceived impact. Instead, it found that GenAI usage and students' GenAI competency have an association with their perceived impact, but that relationship is relatively small compared to other unacknowledged factors (Adjusted R=.1889). "To what extent is students' primary GenAI platform associated with their perceived academic impact of GenAI at High School X?" This research narrows the gap between researchers' understanding of student perception of GenAI. While it does not fully illustrate the impact that the GenAI used has on students' perceived impact, it hints at relationships that may be present. It also presents new variables previously unaccounted for, skill and usage, which will prompt further research in the field to explore their effects, encouraging a more complete understanding. In conclusion, it's necessary to continue exploring the pedagogical role of GenAI to fully understand how to best implement it into education. By continuing to research and explore GenAI, schools can ensure effective implementation, which will aid schools in entering a new era of education assisted through GenAI.

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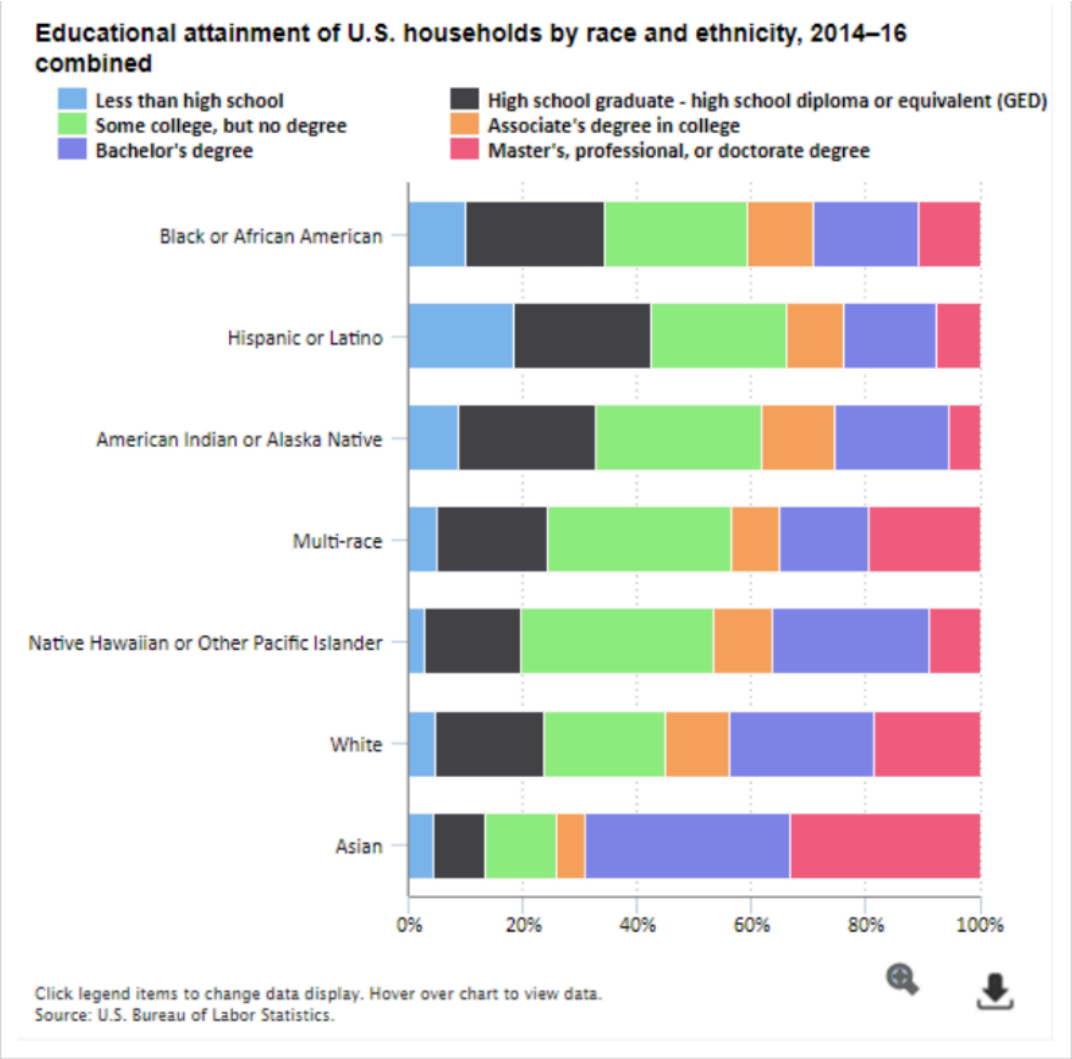
APPENDIX

Appendix A: (U.S. Bureau of Labor Statistics)



Appendix B: (Research Survey)

AP Research form 2.0

This survey is being conducted to investigate student's preference of certain generative AI and explore the root causes of this. Generative AI is AI that is trained on large volumes of data with the ability to generate new content. Their educational potential arises as they grow and develop, currently there is a lack of GenAI implementations across schools. Due to this, students are often found to be using GenAI on their own with no support or training.

This study is necessary in order to gain a full understanding in how different generative AI tools compare in academic potential and how that influences student preference.

All questions are optional. You are not required to answer any questions if you don't want to. You have the right to close this survey and not complete it at any time. If at any time you feel uncomfortable completing this survey feel free to reach out to a school counselor at (email)

By completing this form, you as a student are providing your assent to be apart of this research study.
Please only complete this form if you were given an opt-out form, held it for a two week period and did not opt-out of this study.

All survey responses will be kept **anonymous and confidential, names will not be collected**
Students filling out this survey are encouraged to remain truthful and answer questions to the best of their ability.

This survey should take between 3-5 minutes

1. By continuing, you confirm that you are a high school x student who understands the information above and agrees to participate in this **Anonymous** study.

   Mark only one oval.

   - ◯ Yes
   - ◯ No *Skip to section 8 (End of Survey)*

AI Use

2. Do you use generative AI for school assignments? (Ex: homework, in class assignments, studying, etc.)

   Mark only one oval.

   - ◯ Yes
   - ◯ No *Skip to question 18*

genAI users questions

3. How often do you use these generative AI for school work

   Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
ChatGPT	◯	◯	◯	◯	◯
Gemini	◯	◯	◯	◯	◯
Copilot	◯	◯	◯	◯	◯
Claude	◯	◯	◯	◯	◯
Perplexity	◯	◯	◯	◯	◯
Grok	◯	◯	◯	◯	◯
Deepseek	◯	◯	◯	◯	◯
Other (please specify)	◯	◯	◯	◯	◯

4. Please specify what you put for other

5. What is your skill level at using genAI

Mark only one oval.

- Very High
- Above Average
- Average
- Below Average
- Very Low

Student's Perceived effect

6. genAI helps me better understand concepts from class

Mark only one oval.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

7. When I use genAI I am able to finish assignments faster

Mark only one oval.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

8. Using genAI helps me enhance my work

Mark only one oval.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

9. Using genAI helped me raise my grades

Mark only one oval.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

10. When I use genAI I don't learn content well

Mark only one oval.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

11. I would struggle more in school without genAI

Mark only one oval.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Reliance

12. Which genAI tool do you use the most

Mark only one oval.

- ChatGPT
- Gemini
- Copilot
- Claude
- Perplexity
- Grok
- Other: ____

13. What do you mainly use genAI for?

Check all that apply.

- [ ] Check my work
- [ ] Come up with ideas
- [ ] Understand Concepts
- [ ] Study for quizzes and tests
- [ ] Finish assignments faster
- [ ] To complete most or all of an assingment
- [ ] To complete parts of assignments
- [ ] Other: _____

14. I rely on genAI to complete a majority of assignments

Mark only one oval.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Neutral
- ◯ Disagree
- ◯ Strongly Disagree

15. Why do you use this genAI tool the most for school work

Check all that apply.

- ☐ It's easier to use
- ☐ I trust it's accuracy
- ☐ It's more accessible
- ☐ It's free
- ☐ I like it's interface more
- ☐ I like it's answers more
- ☐ It can recall past chats better than others
- ☐ Other: _____

16. How would you rate your primary genAI in comparison to other ones that you have tried

Mark only one oval.

- ◯ Much Better
- ◯ Somewhat Better
- ◯ About the same
- ◯ Somewhat Worse
- ◯ Much Worse

17. How much do you agree with the following statements

Mark only one oval per row.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
When I used my primary genAI I noticed my grade increased					
My primary genAI has played an important role in my education more than others					
Using my primary genAI had a more positive impact on my grades than other genAI did					

Skip to question 22

No genAI use survey

18. Which of the following reasons most explains your choice to not pursue using genAI

Mark only one oval.

- ◯ It's Cheating
- ◯ Against school policy
- ◯ Hard to use
- ◯ It's Unreliable/Inaccurate
- ◯ Don't need it

19. Would you consider using genAI in the future?

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Maybe

20. Even if you don't use one now have you ever used a gen AI if so which was your most used?

Mark only one oval.

- ChatGPT
- Gemini
- Copilot
- Claude
- Perplexity
- Grok
- Have never used genAI
- Other: ___

21. How much do you agree with the following statements

Mark only one oval per row.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
When I used my primary genAI I noticed my grade increased					
My primary genAI has played an important role in my education more than others					
Using my primary genAI had a more positive impact on my grades than other genAI did					

Demographics

22. Gender?

Mark only one oval.

- Male
- Female
- Prefer not to say
- Other: ___

23. Grade?

Mark only one oval.

- Freshman
- Sophomore
- Junior
- Senior

24. Ethnicity?

Mark only one oval.

- ◯ Caucasian
- ◯ African American or of African American Origin
- ◯ Asian
- ◯ Hispanic including Puerto-Rican
- ◯ Middle Eastern
- ◯ Native American
- ◯ Prefer not to say
- ◯ Other: ___

25. Socio-economic Status (amount in U.S. dollars)

Mark only one oval.

- ◯ Less than 100k
- ◯ 100K-250K
- ◯ 250K or more
- ◯ Prefer not to say

26. Weighted GPA

_____

27. Which class(es) are you a current member of?

Check all that apply.

- [ ] Mr. Y
- [ ] Mr. Z
- [ ] Dr. X
- [ ] None of the above

End of Survey

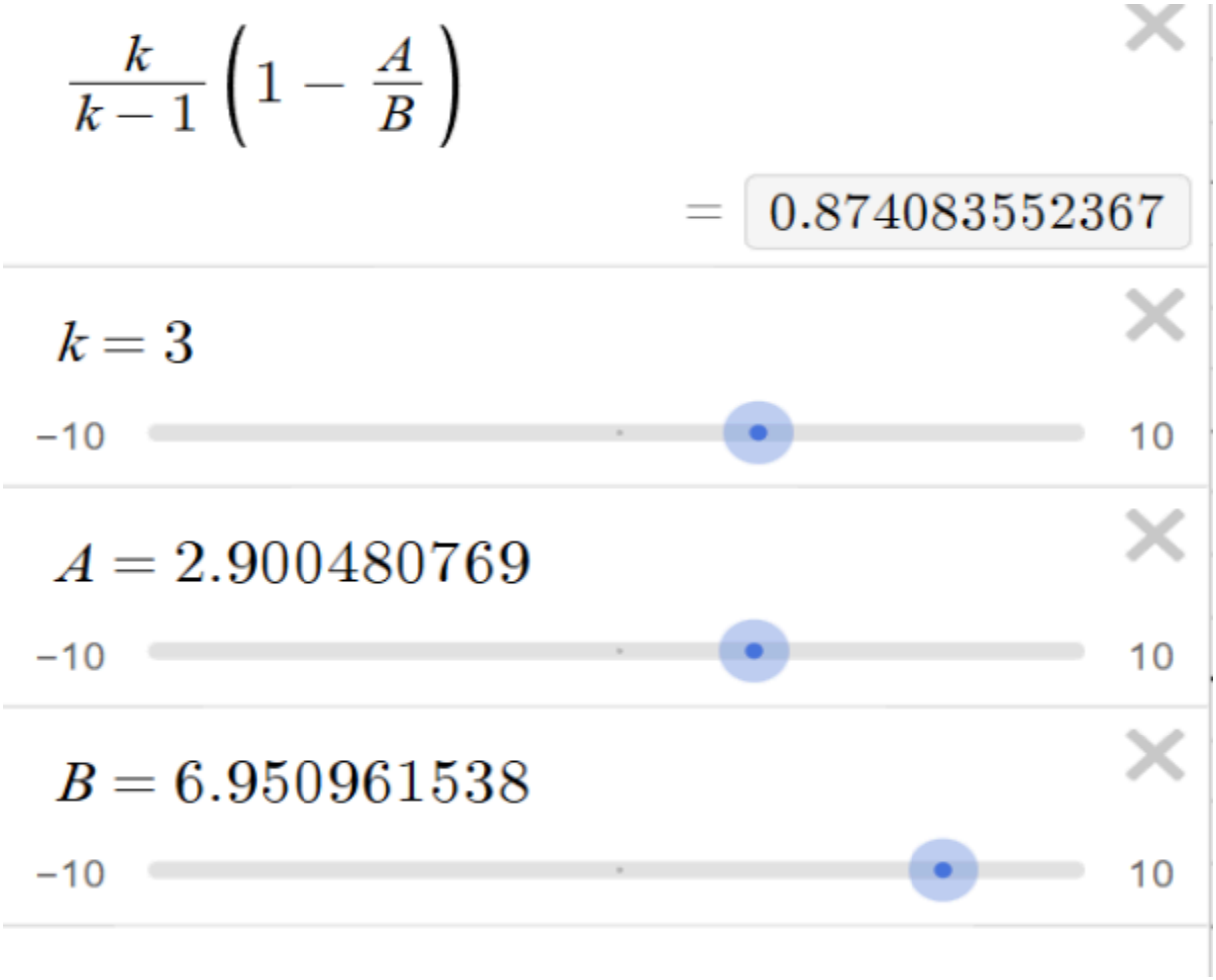
Thank you for taking the time to take this survey. If you have any questions, please feel free to reach out to (email)

Appendix C: (AI Users Regression Analysis)

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.4186571839							
R Square	0.1752738376							
Adjusted R Square	0.1211934335							
Standard Error	0.8176008334							
Observations	66							
ANOVA								
	df	*SS*	*MS*	*F*				
Regression	4	8.666022452	2.166505613	3.240986094	0.01778025476			
Residual	61	40.77673849	0.6684711228					
Total	65	49.44276094						
		Standard Error	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	
Intercept	1.590260178	0.5587819501	2.845940492	0.006022519555	0.4729066119	2.707613744	0.4729066119	2.707613744
Skill	0.3060465565	0.113015405	2.708007429	0.008770680418	0.0800582870	0.5320348259	0.0800582870	0.5320348259
Usage	0.1746288165	0.1472402525	1.186012748	0.2402164541	-0.1197962651	0.4690538981	-0.1197962651	0.4690538981
Gemini	-0.2722299233	0.2793374104	-0.9745559071	0.3336295497	-0.8307995972	0.2863397506	-0.8307995972	0.2863397506
Other	0.05587819325	0.3133048396	0.1783508781	0.8590384259	-0.5706135533	0.6823699398	-0.5706135533	0.6823699398

	Cronbach's alpha	0.8740835524						

Appendix D: (Cronbach's alpha calculation)



Appendix E: (All participants' regression analysis)

SUMMARY OUTPUT								
Regression Statistics								

Multiple R	0.5174722236							
R Square	0.2677775022							
Adjusted R Square	0.1888123309							
Standard Error	0.8419717142							
Observations	114							
ANOVA								
	df	*SS*	*MS*	*F*				
Regression	11	26.4439418171	2.40399471	3.39108366	0.0004989418802			
Residual	102	72.30946949	0.7089163676					
Total	113	98.75341131						
		Standard Error	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	
Intercept	2.316325102	0.3173356965	7.299289449	0	1.686891252	2.945758951	1.686891252	2.945758951
Users	0.5260694433	0.1759959383	2.989099909	0.003506358434	0.1769823341	0.8751565526	0.1769823341	0.8751565526
Gemini	-0.207540805	0.2246243492	-0.923946 1603	0.3576949596	-0.653082 1366	0.2380005267	-0.653082 1366	0.2380005267
Grok	0.1785933895	0.363432844	0.4914068513	0.6241944786	-0.542273 9333	0.8994607123	-0.542273 9333	0.8994607123
Other	-0.107360747	0.3106910079	-0.345554 7289	0.7303890204	-0.723614 8882	0.5088933941	-0.723614 8882	0.5088933941
Sophomore	-0.079079 24608	0.2454889145	-0.322129 601	0.748013797	-0.566005 344	0.4078468519	-0.566005 344	0.4078468519
Junior	-0.250907 1463	0.2041936722	-1.228770 43	0.2219853158	-0.655924 3271	0.1541100344	-0.655924 3271	0.1541100344
Female	-0.307468 4334	0.1802649585	-1.705647 265	0.09111727419	-0.665023 1239	0.05008625706	-0.665023 1239	0.05008625706

Prefer Not to Say/ Other	-0.1254369506	0.3278482516	-0.3826067394	0.7028074785	-0.7757224032	0.524848502	-0.7757224032	0.524848502
Instructor Y	0.8492622835	0.2822326767	3.00908556	0.003301470066	0.2894551074	1.40906946	0.2894551074	1.40906946
Instructor Z	0.3566101	0.2531612	1.4086312	0.1619852545	-0.1455332696	0.8587548896	-0.1455332696	0.8587548896
Instructor X	0.2304080635	0.2555145414	0.9017414909	0.3693185866	-0.2764038178	0.7372199449	-0.2764038178	0.7372199449
			Cronbach's alpha	0.8740835524				

Appendix F: Participant Flow Chart