Variances in Faculty and Student Perceptions Regarding the Integration of ChatGPT in Higher Education[i]

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Abstract

The introduction of ChatGPT has generated considerable attention on college campuses, prompting diverse responses from educational institutions worldwide. We aim to bridge the gap in existing literature by investigating faculty and student perceptions of ChatGPT at a higher education institution in the United Arab Emirates (UAE). Key questions include the extent of knowledge among faculty compared to students, faculty support for ChatGPT adoption in teaching, and the beliefs of both groups regarding ChatGPT's appropriateness in academia. Previous studies have explored the role of Artificial Intelligence (AI) in higher education, revealing variations in students' attitudes and needs for AI training. However, little research specifically addresses ChatGPT perceptions, leading to a lack of clarity on its implications for academic and instructional practices. We used online questionnaires with 45 faculty members and 380 students from across different colleges. We adopted the Technology Acceptance Model (TAM) as the theoretical framework. We employed two-proportion significance tests to identify differences in perceptions between faculty and students. Findings revealed disparities in user knowledge, application, and perceptions of ChatGPT between faculty and students. While both groups were aware of ChatGPT, students exhibited higher ease of use and more extensive application in research activities. Notably, a significant divergence in perceptions of university support for ChatGPT use emerged, with students advocating greater support compared to faculty. Our study highlights a potential distrust between faculty and students regarding ChatGPT use. Building relational trust is crucial, emphasizing the need for faculty to possess technical competence and prioritize students' interests. The results also underscore the inevitability of technology usage in higher education. This research contributes valuable insights into faculty and student perceptions of ChatGPT, emphasizing the need for literacy and competency training to foster responsible and informed use. We encourage university administrators to consider the evolving role of AI tools in education and adapt policies accordingly. In Future research, we may delve deeper into gender differences and include a broader sample from diverse universities to enhance generalizability.

Keywords: ChatGPT, higher education, faculty perceptions, student perceptions, Technology Acceptance Model (TAM), academic integrity, generative AI tools, literacy training

Introduction

Since November 2022, ChatGPT has created a stir on college campuses (Fredrick et al., 2024). Approaches by colleges and universities have varied, including updating academic integrity policies or even outright banning the use of ChatGPT (Clercq, 2023; Mearian, 2023; Schwartz, 2023). As this new technology continues to evolve and expand (Hu, 2023), colleges and universities are grappling with the opportunities and challenges of using such tools (McMurtie, 2023). Very little literature exists on

student and faculty perceptions of ChatGPT. Hence, exploring faculty and students' perceptions on the use of ChatGPT in teaching and learning signals faculty's readiness and willingness to adapt to new technologies in their teaching and students' understanding of how such technology should be used. The introduction of ChatGPT in 2022 has taken the world by surprise. Hence, we encounter contradictory views about its use. For example, some (i.e**.,** Cooper, 2023; Kasneci et al., 2023) support its use in teaching and learning to prepare students for the work environment, which will require them to use all available technological tools, whereas others (Fütterer, 2023) express strong concern regarding the employment of ChatGPT in academia and link it to the spread of plagiarism.

Although some organizations are putting forward ideas on how to incorporate AI in the classrooms, such as the University Center for Teaching and Learning at the University of Pittsburgh (2023), others are banning its use in classrooms, like New York public schools (Rosenblatt, 2023). Whether incorporated or banned, it is essential to know what perceptions students and faculty have about the use of generative AI tools, like ChatGPT, in higher education. Results of our online questionnaires show that students and faculty believe that the use of AI in college classrooms is inevitable. Its use is surrounded by uncertainty, issues of trust, and unclear academic integrity expectations. These perceptions will play a huge role in shaping how generative AI technologies are used and misused both in settings of higher education and across the globe more generally, as students enter the marketplace.

Literature Review

Recent literature has explored AI use in higher education and investigated students' perceptions of AI. Sit et al. (2020) examined attitudes of medical students in the United Kingdom and observed that most students recognized the importance of AI in their education and careers, and also believed that training in AI should be part of the degree earning process (see Dawson, 2020). Out of 484 surveyed participants, only 45 had taken any type of training related to AI, of which no students were trained as part of their coursework (Sit et al., 2020). In another study with medical students, researchers found a difference between faculty and students' professional needs; while students wanted training related to their patient care, faculty wanted training related to their teaching (Wood et al., 2021). The researchers also found out that both students and faculty learned about AI in the media (Wood et al., 2021), indicating a general lack of AI in the curriculum for both parties. Similarly, Teng et al. (2022) surveyed the AI perceptions of students studying healthcare, in the research that spanned eighteen universities across Canada (Teng et al., 2022). The authors noted that roughly 75% of participants had positive outlooks related to AI in general, though students' attitudes varied depending on specific disciplines. Regardless of a positive or negative outlook, most students felt AI training should be included in coursework.

Faculty seem to lack the necessary knowledge, access to training, and support and no common definition of the tools exists. A persistent gap between the perception of AI and its use in education seems to exist. Furthermore, the above-cited study deals with medical students and faculty's experiences which might be different from other students in other colleges. Moreover, we examine all students from all colleges. Moreover, previous studies on perceptions of ChatGPT have focused separately on students' and faculty's perceptions and beliefs on ChatGPT (Fergus et al., 2023). Yet, such investigations have not provided any definitive answers to the many concerns that educators have. For instance, no evidence of perceptions of ChatGPT related to faculty and students or its use in research or classroom was reported.

We aim to fill the gap in the literature by seeking answers to the following questions:

1. How much information/knowledge do faculty have on ChatGPT compared to their students?
2. Do faculty support the adoption and use of ChatGPT in teaching and learning?
3. Do faculty and students believe that ChatGPT should be allowed in academia?

Research Methodology

Data collection tool

We used two online questionnaires to probe into all students' and faculty's perceptions of ChatGPT from across all colleges at a private higher education institution in the United Arab Emirates (UAE). Each questionnaire comprised three sections: Section 1 contained demographic questions about the participants, their gender, specialty, educational level, etc. Section 2 consisted of questions about the participants' knowledge of ChatGPT, how they knew about it, whether their professors prohibited them from using it and the benefits and risks of using ChatGPT in higher education. Section 3 included general questions about the uses of ChatGPT in teaching and learning and the university's reaction towards it. The faculty's questionnaire contained similar questions relating to their specialty, college, gender, knowledge/awareness of the existence of ChatGPT and whether they use it in their research and daily teaching activities or not. The surveys also explored whether the participants received any professional training from the institutions on the use of ChatGPT. The surveys were designed by the Google Forms website. They contained yes/no questions and multiple-choice questions. Each survey was expected to take a maximum of 10 minutes or less.

Participants

Forty-five (45) faculty responses were received and 380 from students. Computer science students come in first place with 14.3%, computer engineering students with 12.6%, electrical engineering with 8%, and mechanical engineering with 5.7%. The distribution included 30.5% third-year students, 30% fourth-year students, 22.4% first-year students, and 17.8% second-year students.

The faculty belonged to the colleges displayed in Table 1.

Table 1: Faculty's colleges

Colleges	Percentages of faculty
College of Engineering (ENG)	41.5%
College of Arts and Sciences (CAS)	25.7%
School of Business Administration (SBA)	10.1%
College of Architecture, Art, and Design (CAAD)	10.1%

As for the faculty's academic ranks, 59.1% were instructors, 11.4% were assistant professors, 11.4% associate professors, and 18.2% were full professors.

Procedures

The surveys' links we shared with the students and faculty through the Office of Research after the Institutional Review Board (IRB) approval was obtained. The surveys were active for the whole

duration of the Fall and the Spring 2023 semesters. Participants answered the surveys on a voluntary basis, and they had the right to withdraw from the study anytime.

Data analysis

Two-proportion significance tests were used to identify all significant differences between faculty's and students' perceptions.

Ethical considerations

In this research, we adhered to the guidelines established by the Institutional Review Board (IRB) of the AUS. We accorded priority to several essential ethical considerations, specifically the principles of voluntary participation, preservation of participants' privacy, and the assurance of their overall well-being. Prior to their engagement in the study, participants were explicitly apprised, via email, of the voluntary nature of their involvement, with the assurance that they retained the liberty to discontinue their participation at any juncture without facing any repercussions. Furthermore, to uphold participants' privacy, their identities were neither disclosed nor mandated for the survey questions employed in this investigation. Another noteworthy ethical measure involved the utilization of online platforms for data collection. This approach facilitated participants in expressing themselves freely, concurrently safeguarding the anonymity of their identities and thereby mitigating any potential risks of exposure.

Theoretical foundation

We adopt the Technology Acceptance Model (TAM) as a theoretical framework. TAM refers to the acceptance, integration, and embracement of new technology (Granić, 2022). According to Davis (1989) technology acceptance, as the first step of technology adoption, is an attitude toward technology, and it is influenced by various factors. The TAM (Davis, 1989) comprises core variables of user motivation (i.e., perceived ease of use, perceived usefulness, and attitudes toward technology) and outcome variables (i.e., behavioral intentions, technology use). Of these variables, perceived usefulness (PU) and perceived ease of use (PEU) are considered key variables that directly or indirectly explain the outcomes (Marangunić & Granić, 2015). These variables are often accompanied by external variables explaining variation in perceived usefulness and ease of use: Among others, subjective norms (SN), self-efficacy (SE), and facilitating conditions (FC) were significantly related to the TAM core variables—however, to different degrees (Abdullah & Ward, 2016). These external variables represent personal capabilities next to contextual factors. Overall, research has revealed that TAM is the most widely used powerful and valid model for prediction and explanation of user's behavior toward acceptance and adoption of educational technology (Abdullah & Ward, 2016; Granić & Marangunić, 2019).

Results

We found discrepancies between faculty and students in terms of the levels of user knowledge of new technology, its use in the classroom and the research activities, and their perceptions of university's support. First, let us start with the similarities. Our results indicate that there is no significant difference between faculty and students when it comes to knowledge of awareness of ChatGPT. That is, both groups are aware of the existence of the ChatGPT application. They also show no significant

difference between faculty and students as regards the ChatGPT learning source. Table 2 displays the percentages of how faculty and students knew about ChatGPT.

Table 2: ChatGPT learning source

ChatGPT Applications	**Students**	**Faculty**
Through webinars/seminars	84.8%	45%
By chance	36.5%	35%
Through friends	56.1%	15%
Communication from the university	21% (by professors)*	100% (through the university)**

*Warning students against the use of ChatGPT in class or in the syllabus.

**Emails sent to faculty asking them to include a warning statement against the use of ChatGPT in coursework.

When it comes to ease of technology use, the two proportion test (see test 1 in appendix) we used indicate a significant difference between faculty and students in terms of use of ChatGPT. That is, students find it very easy to use the ChatGPT application compared to faculty who find it easy to use. As far as the applications of ChatGPT are concerned, table 3 shows that more students (85.7%) use it for writing entire research papers compared to faculty. It is also clear from the table that the applications are different.

Table 3: ChatGPT applications by faculty and students

ChatGPT Applications	**Students**	**Faculty**
Generating ideas	84.8%	93.1%
Writing messages	21.4%	60.2%
Editing content	21.4%	8.1%
Writing whole research papers	85.7%	0 %

Our findings also demonstrate a huge significant difference in the proportion of students who use ChatGPT for research purposes compared to faculty (see test 2 in appendix). In other words, students use it more than faculty for this purpose. As for the relation between the use of ChatGPT in research and plagiarism, although faculty believe that the use of ChatGPT leads to plagiarism more than students; however, the difference is not statistically significant. Regarding the verification of ChatGPT given responses, we found out that the proportion of students who verify the results from ChatGPT is higher than the proportion of faculty who verify the output provided by ChatGPT (see Test 3 in appendix). Test 4 (see appendix) displays significant differences between the proportion of students who use ChatGPT to edit what they have written compared to the proportion of faculty. Furthermore, there is a statistically significant difference, as shown in test 5 in appendix, between the proportion of students who are very satisfied and satisfied with the ChatGPT generated responses when compared to the proportion of faculty.

As for the question, Does the university support the use of ChatGPT in learning, teaching and research?, our results indicate that there is a significant difference in the perceptions about university support when it comes to use of ChatGPT. Results from our study show that the proportion of students who believe that the university should support the use of ChatGPT is higher than the faculty (see test 6 in appendix). On a related issue, when asked whether the university should finance seminars, workshops, etc., on ChatGPT, the proportion of students (test 7 in appendix) who believe that the university should finance seminars, workshops, etc., is significantly higher when compared to the proportion of faculty who believe the same. It is also noted that the proportion of students who believe that the usage of ChatGPT should be encouraged by the university and the professors is significantly higher than proportion of faculty (test 8 in appendix). These findings indicate that students have different perceptions from faculty as detailed and discussed below.

Discussion

From the above, it seems that the university faculty surveyed lack the necessary knowledge, access to training, and support (Petricini et al., 2023). Hence, training in digital competence is key to having quality education (Cabero-Almenara, et al., 2021). Our data shows that faculty do not very much support the use of ChatGPT by students. It could be argued here that they think students will misuse ChatGPT, which is a potential distrust between faculty and students. Hence, it is extremely critical to build relational trust between faculty and students. This is the most important trust in the classroom that directly affects students' achievement (Hoy, 2002; Wilson, 2007). When discussing AI use in the classroom, two important threads of trust studies intersect relationship and trust between faculty and students; and individuals' trust in AI. A major contributor to academic achievement is the faculty-student relationship that are positive relationships and fostered by trust (Deng et al., 2025; Ullah & Wilson, 2007). Accordingly, faculty have two priorities in their trust-building activities; they must have technical competence and the ability to place the student's interests before their own, if necessary (see Barber, 1993). This will also enhance students' wellbeing (EL-Sakran, 2023).

The common belief is that faculty and university administrators think that students will misuse ChatGPT, which is a potential distrust between university administrators, faculty and students (Liu, 2021; Petricini, 2019). For instance, Rudolph et al., (2023) provide some examples about how to combat the use of ChatGPT in assignments by having students do things that the AI tool cannot do and to incorporate the tools into assignments. Hence, providing both faculty and students with a competency grounded in explainability will be essential to help build trust amongst them (Ferrario & Loi, 2022; Jacovi et al., 2021; Liu, 2021). More specifically, relational trust is the most important trust in the classroom and directly affects student achievement (Hoy, 2002; Edwards-Groves & Grootenboer, 2021).

Our results also indicate that faculty, compared to their students, have some level of familiarity with ChatGPT. This might mean that some faculty may not be able to utilize ChatGPT at all. Previously, the introduction of calculators into classrooms caused uncertainty, but they became so ubiquitous that acceptance and use were inevitable (Roberts et al., 2013). This duality might mean giving students the guidance to use AI tools in their work because they want and need to learn how to use these tools, even when faculty may not personally want to use them. Trust in generative AI tools, or "Trustworthy Artificial Intelligence" (Thiebes et al., 2020) is also critical. Successful integration of AI in higher

education will have to rely on trust, particularly because it will allow for a clear understanding of how the tool is used, dispelling notions of overuse, abuse, or outright rejection (Glikson & Wooley, 2020).

Based on our results from the surveys, students and faculty believe that technology usage in higher education is inevitable. This inevitability means that higher education institutions must come to terms with what a tool like this means for academic integrity and instruction, mainly cheating and plagiarism. It is likely the focus of punishable policies will be placed on students' use for cheating, plagiarizing, or otherwise practicing "academic misconduct" or "dishonesty" (Eaton, 2021, p. 15-16; see Morris, 2020, for more details). However, academic integrity can take on several dimensions beyond just students' academic behavior, so institutions should be careful about just creating policies out of fear to prevent students' use (El-Sakran, 2024). Therefore, faculty will need to know how the technology works (Sabzalieva & Valentini, 2023, p. 11). Additionally, faculty will need to understand and know that students' experiences are diverse, and faculty can inadvertently create unfair activities or opportunities based on the generative and responsive nature of AI (ED, 2023).

Based on our data, students want formal instruction on AI use and this interest can help drive decision-makers about implementation and use (see Bilikozen, 2024, for more details on this issue). Xu and Babaian (2021) note that when students' opinions about AI tools are unknown, it is harder to design suitable curriculum and outcomes to meet students' needs. The students' interest in instruction should not be taken lightly, because it can serve as a guide for how institutions might adapt and introduce AI beyond punitive policies. Eaton (2021) explains that unwanted academic behavior often includes moral and policy issues, on top of the teaching and learning (p. 15). Faculty concerned about misuse or academic integrity should consider introducing these tools only so far as it impacts their classroom activities by altering assignments and having students cite the use like other academic resources (Rahman, et al., 2023). It is unfortunate that the results reported in our study show that the big majority (66.7%) of the faculty state that their teaching and assessment activities have not been changed to address the ChatGPT raised concerns.

Short of returning to handwritten exams (see Cassidy, 2023), faculty and administrators will need to explore ways to incorporate new tools will continue to advance much faster than higher education is likely to move. Furthermore, students and faculty will need literacy and competency training for generative AI tools to be up to date with cutting edge technology. It is also important to note here that it is essential to make certain that the information delivered by ChatGPT is accurate (Mhlanga, 2023). Hence, faculty and students will need to exercise critical thinking when it comes to the information they are given and check it with reliable sources (for interesting information on this matter, see Bilikozen, 2024).

Conclusion

In this study, we provide some key elements to understanding students' and faculty's perceptions, knowledge and uses of ChatGPT. Low knowledge of ChatGPT makes it an opportune time to implement programs to build trust and literacy among faculty and students alike. In this research, we show, beyond doubt, that students are interested in learning more about how to use this application successfully and responsibly. Hence, it is time that faculty and students' competency with ChatGPT be augmented, since faculty must incorporate ChatGPT into their teaching. Consequently, we recommend that students and faculty be provided with literacy, competency training for all generative

AI tools and be empowered to adopt new technological changes (Chumpavan et al., 2024).). We also recommend that university administrators should know that policies that prohibit the use of AI tools could lead to even more use (see Lim, et al., 2023), leading to even more unsavory practices. They should also realize that disregard for AI tools will not make them disappear. They should also know that students will leave universities and colleges and enter the workforce (Berthod, 2022), and the training that has been foundational for their practice and use of generative AI technologies will shape the future of economies, societies, and intuitions. This resonates with the environmental aspects that influence the individual's ability to successfully complete a behavior (i.e. Make environmental conditions conducive for improved self-efficacy by providing appropriate support and materials (Abdullah & Ward, 2016; Almuqrin & Mutambik, 2021; Bandura, 2011; Roszkowska-Menkes, 2022).

Although in this study we exhibit some important differences between faculty' and students' knowledge, perceptions, and uses of ChatGPT, it should be noted that the results discussed here are based on the participants' responses to the surveys' questions. Hence, we recommend that future researchers conduct focused interviews and ask the participants why they do what they did. We also suggest that university administrators be asked about their perceptions of the adoption of ChatGPT in education. We also suggest that further research investigate gender differences in the use of ChatGPT between students and faculty. We also propose that this research be repeated with a bigger sample from other universities. We would like also to propose that future researchers may probe into why students from specific colleges use ChatGPT more than others. We would also like to put forward the suggestion that researchers may examine the increase or decrease in the number of grade complaints/appeals that students may fill in because of more confidence and trust in ChatGPT generated responses compared to faculty's given responses.

References

Abdullah, F., & Ward, R. (2016). Developing a general extended technology acceptance model for E-learning (GETAMEL) by analysing commonly used external factors. *Computers in Human Behavior, 56*, 238–256. https://doi.org/10.1016/j.chb.2015.11.036.

Acikgoz, Y., Davison, K. H., Compagnone, M., & Laske, M. (2020). Justice perceptions of artificial intelligence in selection. *International Journal of Selection and Assessment*, 28(4), 399-416, https://doi.org/10.1111/ijsa.12306.

Almuqrin A, Mutambik I. (2021). The explanatory power of social cognitive theory in determining knowledge sharing among Saudi faculty. *PLoS One* 19;16(3):e0248275. doi: 10.1371/journal.pone.0248275. PMID: 33740001; PMCID: PMC7978371.

Ashoori, M., & Weisz, J. D. (2019). In AI we trust? Factors that influence trustworthiness of AI-infused decision-making processes. *arXiv preprint arXiv*:1912.02675.

Atlas, S. (2023). ChatGPT for higher education and professional development: A guide to conversational AI. University of Rhode Island College of Business faculty publications, retrieved from https://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1547&context=cba_facpubs

Bandura, A. (2011). The social and policy impact of social cognitive theory. In M. Mark, S. Donaldson, & B. Campbell (Eds.), *Social psychology and evaluation* (pp. 33-70). New York, NY: Guilford Press.

Berger, C. R., & Calabrese, R. J. (1974). Some explorations in initial interaction and beyond: Toward a developmental theory of interpersonal communication. *Human communication research*, 1(2), 99-112.

Berthod, O. (2022). Institutional theory of organizations. In: Farazmand, A. (eds) Global encyclopedia of public administration, public policy, and governance. Springer, Cham. https://doi.org/10.1007/978-3-030-66252-3_63

Bilikozen, N. (2024). Nurturing responsible AI practices in L2 writing: Empowering student voice English Scholars Beyond Borders (ESBB) Journal, 10(2), 151-185.

Cabero-Almenara, J., Guillén-Gámez, F.D., Ruiz-Palmero, J. *et al.* (2021). Digital competence of higher education professor according to DigCompEdu: Statistical research methods with ANOVA between fields of knowledge in different age ranges. *Educ Inf Technol* **26**, 4691–4708. https://doi.org/10.1007/s10639-021-10476-5

Carleton, R. N. (2016). Fear of the unknown: One fear to rule them all?. *Journal of anxiety disorders*, 41, 5-21.

Cassidy, C. (2023 Jan 9). Australian universities to return to 'pen and paper' exams after students caught using AI to write essays. The Guardian. https://www.theguardian.com/australia-news/2023/jan/10/universities-to-return-to-pen-and-paper-exams-after-students-caught-using-ai-to-write-essays

Castagno, S., & Khalifa, M. (2020). Perceptions of Artificial Intelligence among healthcare staff: A qualitative survey study. *Frontiers in Artificial Intelligence*, 3, 578983. https://doi.org/10.3389/frai.2020.578983

Chumpavan, S., Boonyarattanasoontorn, B., McIver , S., & Tampanich, S. (2024). Using technology to enhance language learning in the digital era. English Scholars Beyond Borders (ESBB),10 (2), 186-199.

Fredrick, D., Craven, L., Eleftheriou, M. & Brodtkorb, T. (2024). The role of faculty expertise and intuition in distinguishing between AI generated text and student writing. *English Scholarship Beyond Borders (ESBB)Journal*, 10 (2), 126-150.

Deng, R., Jiang, M., Yu, X., Lu, Y. & Liu, S. (2025). Does ChatGPT enhance student learning?A systematic review and meta-analysis of experimental studies. *Computers & Education*, 227,105224. https://doi.org/10.1016/j.compedu.2024.105224.

EL-Sakran, T. M. (2023). Technology-enhanced feedback and students' psychological wellbeing. *The Moroccan Journal of Communication Studies*, 3(6), 1-22.

EL-Sakran, T. M. (2024). Incorporating ChatGPT in the academic research process: Avoiding student stigmatization. *Journal of Teaching English for Specific and Academic Purposes***,** 12(1), 175-189, 2024. https://doi.org/10.22190/JTESAP231025015E

Fergus, S., Botha, M., & Ostovar, M. (2023). Evaluating academic answers generated using ChatGPT. *Journal of Chemical Education*,*100* (4), 1672-1675. DOI: 10.1021/acs.jchemed.3c00087

Fütterer, T., Fischer, C., Alekseeva, A. *et al.* (2023). ChatGPT in education: Global reactions to AI innovations. *Sci Rep* **13**, 15310. https://doi.org/10.1038/s41598-023-42227-6

Hoy, W. (2002). Faculty Trust: A Key to Student Achievement. *Journal of School Public Relations*, 23. 10.3138/jspr.23.2.88.

Cave, S., Craig, C., Dihal, K., Dillon, S., Montgomery, J., Singler, B., & Taylor, L. (2018). Portrayals and perceptions of AI and why they matter. https://www.repository.cam.ac.uk/bitstream/handle/1810/287193/EMBARGO%20-%20web%20version.pdf?sequence=1

Chen, H., Chan-Olmsted, S., Kim, J., & Sanabria, I. M. (2021). Consumers' perception on artificial intelligence applications in marketing communication. Qualitative Market Research: An International Journal, 25(1), (pp. 125-142), https://doi.org/10.1108/QMR-03-2021-0040

Clercq, G. D. (2023). Top French university bans use of ChatGPT to prevent plagiarism. Reuters. https://www.reuters.com/technology/top-french-university-bans-use-chatgpt-prevent-plagiarism-2023-01-27/.

Cooper, G. (2023). Examining science education in ChatGPT: An exploratory study of generative artificial intelligence. *J Sci Educ Technol* 32, 444–452. https://doi.org/10.1007/s10956-023-10039-y

Coffey, L. (31 Jul 2023). Professors craft courses on ChatGPT with ChatGPT. Inside Highered. https://www.insidehighered.com.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340. https://doi.org/10.2307/249008

Eaton, S. E. (2021). Plagiarism in higher education: Tackling tough topics in academic integrity. ABC-CLIO.

Edwards-Groves, C. & Grootenboer, P. (2021). Conceptualising five dimensions of relational trust: Implications for middle leadership. *School Leadership & Management*, 41:3, 260-283, DOI: 10.1080/13632434.2021.1915761.

Ferguson, R., Brasher, A., Clow, D., Cooper, A., Hillaire, G., Mittelmeier, J., ... & Vuorikari, R. (2016). Research evidence on the use of learning analytics: Implications for education policy. European Commission JRC science for policy report, https://doi:10.2791/955210.

Ferrario, A., & Loi, M. (2022, June). How explainability contributes to trust in AI. In 2022 ACM Conference on Fairness, Accountability, and Transparency (pp. 1457-1466).

Foltynek, T., Bjelobaba, S., Glendinning, I., Khan, Z., Santos, R., Pavletic, P., & Kravjar, J. (2023). ENAI recommendations on the ethical use of Aritifical Intelligence in education. International *Journal for Educational Integrity* 19(12). https://edintegrity.biomedcentral.com/articles/10.1007/s40979-023-00133-4.

Granić, A. (2022). Technology Acceptance and Adoption in Education. In: Handbook of Open, Distance and Digital Education. Springer, Singapore. https://doi.org/10.1007/978-981-19-0351-9_11-1.

Granić, A., & Marangunić, N. (2019). Technology acceptance model in educational context: A systematic literature review. *British Journal of Educational Technology, 50*(5), 2572–2593. https://doi.org/10.1111/bjet.12864.

Godoe, P., & Johansen, T. (2012). Understanding adoption of new technologies: Technology readiness and technology acceptance as an integrated concept. Journal of European psychology students, 3(1). Greco, V., & Roger, D. (2003). Uncertainty, stress, and health. *Personality and Individual differences*, 34(6), 1057-1068.

Grupe, D. W., & Nitschke, J. B. (2013). Uncertainty and anticipation in anxiety: an integrated neurobiological and psychological perspective. *Nature Reviews Neuroscience*, 14(7), 488-501.

Hervieux, S., & Wheatley, A. (2021). Perceptions of artificial intelligence: A survey of academic librarians in Canada and the United States. *The Journal of Academic Librarianship*, 47(1), https://doi.org/10.1016/j.acalib.2020.102270

Hopkins, K. D. (1998). Educational and psychological measurement and evaluation. Allyn & Bacon, A Viacom Company, www.abacon.com.

Hoy, W. K. (2002). Faculty trust: A key to student achievement. *Journal of School Public Relations*, 23(2), 88-103.https://voicebot.ai/2023/02/09/chatgpt-is-banned-by-these-colleges-and-universities/

Hu, K. (2 Feb 2023). ChatGPT sets record for fastest-growing user base - analyst note. Reuters. https://www.reuters.com/technology/chatgpt-sets-record-fastest-growing-user-base-analyst-note-2023-02-01/

Jacovi, A., Marasović, A., Miller, T., & Goldberg, Y. (2021, March). Formalizing trust in artificial intelligence: Prerequisites, causes and goals of human trust in AI. In Proceedings of the 2021 ACM conference on fairness, accountability, and transparency (pp. 624-635).

Johnson, L., Becker, S. A., Cummins, M., Estrada, V., Freeman, A., & Hall, C. (2016). NMC horizon report: 2016 higher education edition (pp. 1-50). The New Media Consortium, https://www.learntechlib.org/p/171478/.

Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günnemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learn. Indiv. Diff.* **103**, 102274. https://doi.org/10.1016/j.lindif.2023.102274

Kurniati, E. Y., & Fithriani, R. (2022). Post-Graduate students' perceptions of Quillbot utilization in English academic writing class. *Journal of English language teaching and linguistics*, 7(3), 437-451, https:// DOI:10.21462/jeltl.v7i3.852.

Laï, M. C., Brian, M., & Mamzer, M. F. (2020). Perceptions of artificial intelligence in healthcare: findings from a qualitative survey study among actors in France. *Journal of translational medicine*, 18(1), 1-13, https://doi.org/10.1186/s12967-019-02204-y

Lim, W., Gunasekara, A., Pallant, J. L., Pallant, J. I., & Pechenkina, E. (2023) Generative AI and the future education: Ragnarök or reformation? A paradoxical perspective from management educators. *International Journal of Management Education*, 21(2). https://doi.org/10.1016/j.ijme.2023.100790.

McArthur, D., Lewis, M., & Bishary, M. (2005). The roles of artificial intelligence in education: current progress and future prospects. *Journal of Educational Technology*, 1(4), 42-80.

McCarthy, J., Minsky, M. L., Rochester, N., & Shannon, C. E. (2006). A proposal for the Dartmouth summer research project on artificial intelligence, august 31, 1955. *AI magazine*, 27(4), 12-12.
McCormack, M. (2023). EDUCAUSE QuickPoll : Adopting and Adapting to Generative AI in Higher Ed Tech. *EDUCAUSE*. https://er.educause.edu/articles/2023/2/educause-quickpoll-results-did-chatgpt-write-this-report
McMurtie, B. (2023). ChatGPT is everywhere. The chronicle of higher education. Retrieved from https://www.chronicle.com/article/chatgpt-is-already-upending-campus-practices-colleges-are-rushing-to-respond
Mearia, L. (2023). Schools look to ban ChatGPT, students use it anyway. Computer World. Retrieved from https://www.computerworld.com/article/3694195/schools-look-to-ban-chatgpt-students-use-it-anyway.html
Momani, A. M., & Jamous, M. (2017). The evolution of technology acceptance theories. *International Journal of Contemporary Computer Research (IJCCR)*, 1(1), 51-58.
Moor, J. H. (2005). Why we need better ethics for emerging technologies. Ethics and information technology, 7(3), 111-119.
Muscanell, N., & Robert, J. (2023). EDUCAUSE QuickPoll results: Did ChatGPT write this report? *EDUCAUSE*. https://er.educause.edu/articles/2023/2/educause-quickpoll-results-did-chatgpt-write-this-report
Petricini, T. (2019). Explorations in the noosphere: Hermeneutic presence and hostility in cyberspace. *Explorations in Media Ecology*, 18(1-2), 57-71.
Petricini, T. (2024). ChatGPT: Everything to everyone all at once. Forthcoming in *ETC: A Review of General Semantics, 8*.
researcharchive/3357/Public-Attitudes-to-Science-2014.aspx
Reuman, L., Jacoby, R. J., Fabricant, L. E., Herring, B., & Abramowitz, J. S. (2015). Uncertainty as an anxiety cue at high and low levels of threat. *Journal of behavior therapy and experimental psychiatry*, 47, 111-119.
Roberts, D., Lenug, A., & Lins, A. (2013). From the Slate to the Web: Technology in Mathematics Curriculum. In M.A. Clements, A.J. Bishop, C. Keitel, J. Kilpatrick, & F.K.S. Leung (Eds.) Third International Handbook of Mathematics Education. Springer.
Roll, I., & Wylie, R. (2016). Evolution and revolution in artificial intelligence in education. *International Journal of Artificial Intelligence in Education*, 26(2), 582-599, https://doi.org/10.1007/s40593-016-0110-3
Roszkowska-Menkes, M. (2022). Institutional Theory. In: Idowu, S., Schmidpeter, R., Capaldi, N., Zu, L., Del Baldo, M., Abreu, R. (eds) Encyclopedia of Sustainable Management. Springer, Cham. https://doi.org/10.1007/978-3-030-02006-4_389-1
Rowe, W. (1994) Understanding uncertainty. Risk Analysis, 14(5), 743-750.
Rudolph, J., Tan, S., & Tan, S., (2023). ChatGPT: Bullshit spewer or the end of traditional assessments in higher education? *Journal of Applied Learning & Teaching*, 6(1).
https://journals.sfu.ca/jalt/index.php/jalt/article/view/689/539
Rummel, R. J. (1988). Applied factor analysis. Northwestern University Press.
Sabzalieva, E., & Valentini, A. (2023). ChatGPT and Artificial Intelligence in higher education. *UNESCO*. https://www.iesalc.unesco.org/
Sangapu, I. (2018). Artificial intelligence in education-from a teacher and a student perspective. http://dx.doi.org/10.2139/ssrn.3372914.

Schwartz, E. H. (2023). ChatGPT is banned by these colleges and universities. Voicebot.ai. Retrieved from Sit, C., Srinivasan, R., Amlani, A., Muthuswamy, K., Azam, A., Monzon, L., & Poon, D. S. (2020). Attitudes and perceptions of UK medical students towards artificial intelligence and radiology: a multicentre survey. *Insights into imaging*, 11, 1-6. https://doi.org/10.1186/s13244-019-0830-7

Stai, B., Heller, N., McSweeney, S., Rickman, J., Blake, P., Vasdev, R., Edgerton, Z., Tejpaul, R., Peterson, M., Rosenberg, J., Kalapara, A., Regmi, S., Papanikolopoulos, N., & Weight, C. (2020). Public Perceptions of Artificial Intelligence and Robotics in Medicine. *Journal of Endourology*, 34(10), 1041–1048. https://doi.org/10.1089/end.2020.0137.

Taherdoost, H. (2018). A review of technology acceptance and adoption models and theories. *Procedia manufacturing*, 22, 960-967.

Teng, M., Singla, R., Yau, O., Lamoureux, D., Gupta, A., Hu, Z., Kell, D., MacMillan, K., Malik S, Mozzoli, V., Teng, Y. Laricheva, M., Jarus, T. . & Field, T. S. (2022). Health care students' perspectives on Artificial intelligence: countrywide survey in Canada. *JMIR Medical Education*, 8(1). doi:10.2196/33390

The Royal Society. Machine learning: The power and promise of computers that learn by Example. (2017). https://royalsociety.org/-/media/policy/projects/machine-learning/publications/machine-learning-report.pdf

Thiebes, S., Lins, S., & Sunyaev, A. (2021). Trustworthy artificial intelligence. *Electronic Markets*, 31, 447-464.

U.S. Department of Education [ED], (2023). Artificial Intelligence and Future of Teaching and Learning: Insights and Recommendations. Office of Educational Technology, Washington, D.C., https://tech.ed.gov.

Ullah, H., & Wilson, M. A. (2007). Students' academic success and its association to student involvement with learning and relationships with faculty and peers. *College Student Journal*, 41(4), 1192-1203.

Umbrello, S. (2021). AI Winter. In M. Klein & P. Frana (eds.), Encyclopedia of artificial intelligence: The past, present, and future of AI (pp. 7-8). ABC-CLIO.

Veletsianos, G., Kimmons, R., & Bondah, F., (2023 Mar 15). ChatGPT and higher education: Initital prevalance and areas of interest. *EDUCAUSE*. https://er.educause.edu/articles/2023/3/chatgpt-and-higher-education-initial-prevalence-and-areas-of-interest

Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision sciences*, 39(2), 273-315.

Wood, E. A., Ange, B. L., & Miller, D. D. (2021). Are we ready to integrate artificial intelligence literacy into medical school curriculum: students and faculty survey. *Journal of medical education and curricular development*, 8, pp. 1-5. https://doi.org/10.1177/23821205211024

Xu, J. J., & Babaian, T. (2021). Artificial intelligence in business curriculum: The pedagogy and learning outcomes. *The international journal of management education*, 19(3), 100550, https://doi.org/10.1016/j.ijme.2021.100550.

Appendix

Test 1

Null hypothesis	H_o: $p_1 - p_2 = 0$
Alternative hypothesis	H_1: $p_1 - p_2 < 0$

Method	Z-Value	P-Value
Normal approximation	-5.01	0.000
Fisher's exact		0.000

Test 2

Null hypothesis	H_o: $p_1 - p_2 = 0$
Alternative hypothesis	H_1: $p_1 - p_2 < 0$

Method	Z-Value	P-Value
Normal approximation	-9.35	0.000
Fisher's exact		0.000

Test 3

Null hypothesis	H_o: $p_1 - p_2 = 0$
Alternative hypothesis	H_1: $p_1 - p_2 < 0$

Method	Z-Value	P-Value
Normal approximation	-3.76	0.000
Fisher's exact		0.000

Test 4

Null hypothesis	H_o: $p_1 - p_2 = 0$
Alternative hypothesis	H_1: $p_1 - p_2 < 0$

Method	Z-Value	P-Value
Normal approximation	-3.39	0.000
Fisher's exact		0.002

Test 5

Null hypothesis	H_o: $p_1 - p_2 = 0$
Alternative hypothesis	H_1: $p_1 - p_2 < 0$

Method	Z-Value	P-Value
Normal approximation	-3.96	0.000
Fisher's exact		0.000

Test 6

Null hypothesis	H_o: $p_1 - p_2 = 0$
Alternative hypothesis	H_1: $p_1 - p_2 < 0$

Method	Z-Value	P-Value
Normal approximation	-13.68	0.000
Fisher's exact		0.000

Test 7

Null hypothesis	H_o: $p_1 - p_2 = 0$
Alternative hypothesis	H_1: $p_1 - p_2 < 0$

Method	Z-Value	P-Value
Normal approximation	-2.21	0.013
Fisher's exact		0.012

Test 8

Null hypothesis	H_o: $p_1 - p_2 = 0$
Alternative hypothesis	H_1: $p_1 - p_2 < 0$

Method	Z-Value	P-Value
Normal approximation	-5.94	0.000
Fisher's exact		0.000

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