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The dark side of AI: An empirical study investigating the impact of privacy concern on perception towards AI created content within the educational domain in the developing Egyptian context.

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Abstract

Purpose: The potential benefits and applications of Artificial Intelligence (AI) are both promising and challenging. For AI to fulfill its potential, privacy concern and its impact on perception must be explored. The privacy concern issues related to artificial intelligence (AI) needs much attention as it is still understudied. Through the lens of university students, this paper examines the impact of privacy concern on perception of AI created content. Perception is assessed through AI exposure, AI attention and AI interpretation.

The study explores the impact of privacy concerns on university students' perception of AI-created content, focusing on exposure, attention, and interpretation.

Conducted via online surveys targeting Egyptian university students, data was analyzed using SPSS 20.0.

Findings show a weak but significant relationship between privacy concern and exposure, but no significant link with attention or interpretation.

Respondents see AI as beneficial in education but remain highly concerned about privacy.

Contributions include expanding AI literature in developing contexts and highlighting privacy's effect on perception.

Keywords: Privacy concern, AI, Technology, Education, Perception, Exposure, Attention, Interpretation

1. Introduction

The growing interest in artificial intelligence (AI) has been fueled by its seemingly promising benefits to scholars, practitioners and the public as a whole (Davenport *et al*., 2020). Such technologies have and will continue to introduce reflective changes to diverse landscapes, especially in the educational sector. Therefore, an increasing number of businesses (mainly services) are merging AI within their settings. But, as the abilities of AI escalate so, does the privacy and security concern of publics (Fang *et al*., 2023; Ioannou and Tussyadiah, 2021, Tussyadiah and Miller, 2019). The potential for personal information to be collected, stored, and used without individuals' knowledge or consent, as well as the risk of security breaches raises concerns about AI technologies (Davenport *et al*., 2020). Accordingly, this relative vulnerability to privacy concern and violations highlights the dark side of AI which is scarcely studied (Pramod, 2022, Ioannou *et al*., 2020; Tussyadiah and Miller, 2019).

Prior studies claim that there is a limited body of research that focuses on privacy concern as a significant initiative that creates one's perception. Moreover, studies do not clarify that people are alarmed that technology requires a lot of usage of their personal data, accordingly it might allow people to perceive AI content creation as negative (Vimalkumar *et al*., 2021; Gao *et al*., 2020). This paper adds insightful contributions to the narrow AI literature focused on the service divisions. Furthermore, this study will enrich the understanding of privacy concern and unveils the elements of perception under the umbrella of AI in an educational setting. As well as, providing fruitful implications to help service practitioners and AI developers manage

privacy concern. This study will help increase user's confidence that would eventually lead to making more informed decisions when it comes to privacy while being exposed to AI created content. The main research question that is to be sought: does privacy concern impact user's perception when it comes to AI created content in an educational context?

2. Literature review

2.1AI technology

Artificial intelligence (AI) is changing societies in an algorithmic way (Yrjölä et al., 2024). This shift of digitalization is because of technology shifting from being a tool used by users to being the user in the value itself (Keng et al., 2023). According to Hofacker and Corsaro (2020), there is a mounting number of human-less transactions that are powered by intelligent technology across numerous industries, sectors and domains. In the marketing domain for example, an application uses natural language processing to simulate human-like conversation, interacting with users through a digital interface (Thomaz *et al*., 2020). The advancements in AI depend firstly on the availability and acceleration of large amounts of analyzed data. Secondly, the free flow of data which is considered the fuel of AI success (Mazurek and Malagocka, 2019). Nevertheless, AI might not be accepted positively by all stakeholders due to issues implying increased ability of technology developers to collect, analyze, combine and control users' data (Kronemann *et al*., 2023). In other words, technology-based privacy concerns that were salient before will now be of more significance with the development of more advanced technologies like generative AI (Dai *et al*., 2023).

2.1.1 AI technology in education

The increasing focus on artificial intelligence (AI) in education is due to the promising opportunities and acknowledged difficulties it presents. In general, AI technologies include sensors, voice recognition, robotics, automation, and intelligent learning (Fan *et al*., 2022). Whereas, the potential uses of AI in the educational context include but is not limited to automated performance enhancement (APE), intelligent tutoring systems (ITS), personalized learning systems (PLS), sentiment analysis and many more applied to various areas of teaching, learning and research. Furthermore applications include student support, tutoring personalization, automated grading and assessment, education data analytics, co content development and educational planning, administration and academic performance (Igbokwe, 2023). Presently, technology and information are continually evolving, aggressively impacting education (Mcnicholl *et al*., 2019). In today's world, integrating AI technologies into learning experiences is a must to be able to face challenges of the 4.0 revolutionary industries.

2.1.2 Privacy concern

Information privacy is "an individual's claim to control the terms under which personal information – information identifiable with the individual – is acquired, disclosed, and used" (Feigenbaum *et al*., 1997). Bélanger and James (2020) define information privacy as the capacity to create, govern and enforce rules to manage personal information in a social setting, allowing individuals to exercise control over their personal data. Privacy concern results from the widespread abuse and violations of organizations to personal information without consent (Cram *et al*., 2019). The matter of privacy concern, its implications and

consequences are under heightened attention across different academics, social critics as well as regulators and developers (Kelso *et al.*, 2025; Martin and Murphy, 2019).

For successful expansion of AI technologies among diverse contexts, protecting users' information and privacy is mandatory else there is a risk of abandoning investment in such a technology (Pappas, 2016). Privacy concern in service settings vary according to the context (online vs. on-site) (Ioannou *et al*., 2020) and subsequently perception and behaviour (Araujo *et al*., 2020). This is why it is crucial for academia as much as practitioners to understand the dynamics of privacy concern in relation to AI and its developments (Manikonda *et al*., 2018). Both AI developers and educational providers are considering privacy concern related to AI applications for proper perceptions thus decisions. Therefore, securing privacy issues concerning AI is a major priority. When it comes to privacy concern, one vital issue is the rich digital footprint of personal data that leads users to become active participants in the destruction of their own privacy (Pomfret *et al*., 2020). Presently, privacy and security of information is the main concern related to the internet, algorithms and data in the knowledge-based digital environment (Brill *et al*., 2019).

Despite the consent of experts about what is and is not AI within the educational context, the public views may be still mixed (Schif, 2022). The successful engagement of AI technologies requires knowledge about what non experts think about this context. A coherent understanding of privacy concern towards AI and perception in general and towards education in specific will not only lead to better engagement with such technology but, it can also result in more responsible research and

development. From a theoretical perspective, the research tackling privacy concern in the technological domain is developing theories that make sense of the construct when being engaged with the AI technology. According to Bélanger & James (2020), there are 14 theories that can relate to privacy concern. Yet, the present status of theory based empirical research on privacy concern is fragmented in relation to statistical significance and magnitude of relationships. To conclude, despite the extensive examination of the different elements within the privacy concern domain the results are still contradictory and inconsistent with little consensus about what are the factors affected by the privacy concern. The importance of acknowledging such variables may be uneven with empirical realities due to the lack of understanding of issues related to security concern and data privacy. In efforts of addressing such gaps, the following study examines the impact of privacy concern on perception when exposed to AI created content with a focus on the areas of education.

Beyond the conceptual definition, attempts are made to try to operationalize and strengthen privacy concern through several measurements and across different contexts in hopes of a deeper understanding (e.g., Bartol *et al*., 2024; Yun *et al*., 2019). Past scholars provided a conceptual foundation for the key AI debates when it comes to privacy concern. Yet, the work and results of various scholars resulted in a broadly deviating body of findings that needs to be fully explained. Previous studies have explored specific stakeholders' variables with respect to AI and privacy concern. For example, Hu and Min (2023) stated that AI causes uneasiness as a result of privacy concern. Additionally, Beets *et al*., (2020) studied AI issues related to

familiarity, experience, applications, benefits and risks within the healthcare context when it comes to data privacy. It was realized that most of the respondents deemed control over their information due to having concern. Likewise, Kronemann *et al*., (2023) found out that privacy concern encourages disclosure of information due to the influence of AI. Within the educational context, a lot of studies tackled privacy concern as a variable under the umbrella AI (eg. Nguyen *et al*., 2023; Zhang and Aslan, 2021). Still, more research is needed emphasizing such results and so, this paper aims to respond to this call. This study will critically reflect on the topic of privacy concerns in relation to AI, in terms of perception to answer the overall research question.

To bridge this gap in knowledge and literature, the current study builds on research examining the impact of privacy concern of university students exposed to AI created content on their perception. First, Stone (2016) reported users' negative perceptions in regard to the greater use of the AI in their educational journey. A significant amount of the decline was attributed to many indicators. Privacy concern is considered one of the major causes of such consequence. Second, attention (in particular the visual one) affects the clarity and intensity of perception. The privacy concern is an enduring backdrop of attention and subsequently, perception (Rensink, 2015). Third, services appeal to consumers according to parameters of life quality, security or wellbeing by means of perception. Digging deeper in that direction, it is realized that investigating multi-sensory perception requires the measurement of the related perceptual, physical and psychophysical qualities. In a broader view, behavioral responses and emotions are to be measured to

strengthen the impact of interpretation as the final element in the perceptual process (Pishnyak and Khalina, 2021). As a result, this paper assumes that student's privacy concern impacts their perception of the AI created content through the element of exposure, attention and interpretation. Therefore, the following relationships are hypothesized:

H1: There is a relationship between privacy concern and perception of AI created content through exposure.

H2: There is a relationship between privacy concern and perception of AI created content through attention.

H3: There is a relationship between privacy concern and perception of AI created content through interpretation.

2.2Perception

2.2.1 Perception and exposure

Perception is the intricate multifaceted process by which the brain interprets and gives meaning to the sensory information received from the environment. It is a dynamic and interactive process that unfolds in stages, from the initial detection of stimuli to the construction of internal representations of reality. (Hameroff, 1998). According to the theory of attention, exposure is necessary for an individual to attend to and interpret sensory information (Osmany, 2023). When an individual is exposed to a stimulus, their attention is drawn to it, and they begin to process the information. The longer an individual is exposed to the stimulus, the more attention they are likely to devote, and the more information they are likely to perceive (Moran & Desimone, 1985).

It has long been argued that one's response to what he/she perceives roots back to the amount of exposure that was encountered. This is true especially in the educational domain where, users perceive and react to specific activities and approaches differently based on exposure and its intensity (Bray *et al*., 2023). Stone (2016) found out that, students that are exposed to AI programs later in their journey inhibited more traditional paper and pencil experiences which affected their perception of AI. In view of that, user's perception of specific outcomes is highly dependable and heavily impacted by exposure.

2.3.2 Perception and attention

It was already recognized long ago that individuals have to pay attention to perceive adequately. But it is only a short while ago, that a better understanding of what attention is and how it relates to perception was demonstrated (Strack and Förster, 2009). Rensink, (2015) discussed how attention relates to perception which emphasis behavioural aspects. Attention creates the impression of what and how the surrounding is seen. As much as the surroundings may seem appealing still, impressions may not be correct. That being said, failure of attention can result in various perceptual shortfalls. In general, behaviour depends upon the occurrence of certain kinds of perception that needs attention. It is proven that, perception is the result of several sophisticated interacting processes. Where, much of an individual's perception depends on managing attention (right item at the right time). Attention is more than an element that simply modifies perception on occasion; it is a central factor to the perception of the world around us.

2.3.3 Perception and interpretation

The measurement of elements (attentive, cognitive and emotional) related to human perception is fundamental. They are highly informative measures that facilitate the handling of complexities to provide valid information from a perceptual standpoint (Bach et al., 2023). When it comes to interpretation, "Measuring the Impossible" is a recently launched European call for research projects which invites innovative proposals to develop new methods for measuring human perception and interpretation-related quantities and qualities. Beside the financial reward, this call promoted motivations for interdisciplinary research within social science. The ongoing studies measuring interpretation should result in a strong foundation concerning the understanding of perception and its formation. Nevertheless, the relationship between humans and their environment is experienced through the senses and their perceptual measurements (Bach et al., 2023). Measurements related to interpretation and perception have a wide range of actual and potential applications that are key for obtaining valuable information.

3. Research Methodology

This study was conducted using quantitative methods. The research was considered conclusive research that used a cross sectional design and had a descriptive purpose (to gain more information and identify particular characteristics within a certain field of study). Respondents were collected via a convenience sample due to the nature of the study to ensure the collection of an adequate number of university students in a relatively short period of time in order to test the hypotheses. The data

collection was conducted during October 2023 till February 2024 (the semester of Fall23/24). Students were approached through emails and asked if they were willing to participate in a brief research study.

To test the proposed conceptual model, an empirical study was conducted among postgraduate and undergraduate students (males and females) within the age group of 18-55 and university Moodle users from the Arab Academy for Science and Technology and Maritime transport (AASTMT) with different backgrounds (age, income, gender, etc.). The AASTMT University is one of the largest Universities within the Higher Education Egyptian Landscape that is known for its successful utilization of AI technologies within their system. Moreover, the university provides highly targeted recommendations and personalized messages based on each student's unique search history and habits on their website, social media and students Moodle. According to Grewal *et al*., (2021) the AI has the ability to gain deep insights into individuals, which may activate privacy concern. In turn, this may lead to enormous risks of circulating anxiety among users in common communities which could result in leveraged concern of privacy. Furthermore, Negm *et al*., (2012) validated the above by stating that those individuals' interactions become a believed credible source of information which may affect perception. Thus, the research question tackles a vital area of research that addresses barriers and challenges of AI technologies.

This study employed administered structured questionnaires to gather data. In this study, the perception was determined through assessing the elements of exposure, attention and interpretation thereby providing a holistic understanding of the variable. The scales that measured the variables in the study were from the work of various scholars like

Scharowski *et al*., (2024); Moore *et al*., (2005); Williams *et al*., (2005); Mothersbaugh *et al*., (2002); Srinivasan *et al*., (2002); Stevenson *et al*., (2000); Muehling *et al*., (1991); Muehling *et al*., (1990). A total of 400 questionnaires were distributed, and 330 valid responses were received, resulting in a response rate of 82.5%. Following the data collection phase, data was analyzed using SPSS 20.0® (Statistical Package for Social Science) to test the hypotheses and conduct further examination.

3.1 The proposed conceptual model

In order to determine the assumed relationships between the independent and dependent variables studied, a conceptual framework was designed and tested. The design was based on the relations built from reviewing the literature of privacy concern of user's engaged with AI created content in relation to their perception. The development of a conceptual framework dictated this research to which variables are to be investigated, which are to be omitted and the assumed relationships between the chosen ones based on the gaps in the literature. Furthermore, demonstrated ideas on how the research problem would be tackled, understood, studied and explained. Accordingly, the current conceptual framework targets user's perceptual elements from a privacy concern perspective when it comes to AI generated content within an Egyptian educational context. Figure 1 presents the proposed conceptual model.

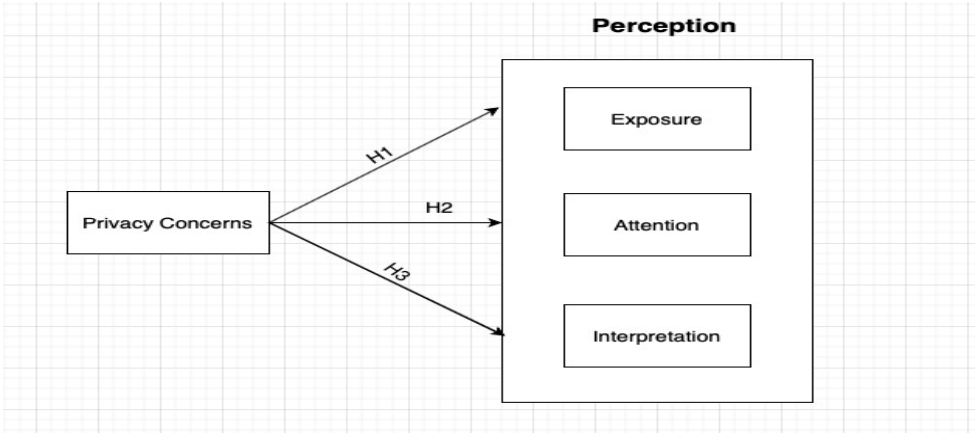

Figure 1: The proposed conceptual Model (researchers' own creation)

From an academic perspective, privacy concern is considered an emerging topic among academics in the scope of AI technologies. However, the literature is vague with some issues related to its impact on users' perception. Evaluating the perception of AI created content through its different elements in an educational domain is rare. Therefore, this research model helps understand the impact of privacy concern on the perception of AI created content. In general, diverse scholars supported a concrete negative relationship between privacy concern and one's perception within a technological framework among various contexts (eg. Vimalkumar *et al*., 2021; Dhagarra *et al*., 2020; Mutimukwe *et al*., 2020). Yet, there are still many areas to be explored uncovering interesting insights as understanding perception is critical to understanding intention that pave the way for behaviour (Thongsri *et al*., 2020).

The paper highlights the choice of the model variables in relevance to answering the research questions mentioned above. The researchers wanted to make sure that the conceptual framework along with the correct choices of methodological alternatives were to direct the research in the right path. This study sheds light on the relationship

between user's privacy concern and his/ her perception of AI created content through recognizing the impact on exposure, attention and interpretation. This distinctive combination of variables and their relationships provides a holistic understanding of the multi-dimensional perception within the AI technological framework in relation to privacy concern.

4. Research Analysis and Findings

This study's analysis is based on university students' opinions regarding privacy concern on perception of AI created content. The following table (Table 1) illustrates the respondents' socio-demographic traits.

Table 1: Respondents' Demographics

Item	Frequency	Percentage
Gender		
Female	**182**	**55.7**
Male	**145**	**44.4**
Age		
18-24	**87**	**26.4**
25-34	**62**	**18.8**
35-44	**133**	**40.3**
45-54	**40**	**12.1**
55 and above	**8**	**2.4**
Education		
High school graduate	**41**	**12.5**
Public university/ college graduate	**57** **211**	**17.3** **63.9**

Item	Frequency	Percentage
Private university/ college	9	2.7
graduate	12	3.6
Public Post college graduate		
Private Post college graduate		
City of Residence		
Cairo	73	23.5
Alexandria	236	69.7
Other	21	6.8
Income		
Less than 5000	17	4.9
5000 - 15000	50	15.2
15001 - 25 000	133	40.4
25001 - 40000	101	30.7
Over 40000	29	8.8

Most of the sample was within the age group of 35-44 with a private college degree and an income bracket between 15001 - 25000. Such descriptive analysis may have contributed to the research.

Next, the reliability analysis was conducted to see if the scales created were reliable to use in this study. This analysis illustrates whether the scales were consistent, dependable, and steadfast to be used in the Egyptian context. All the scales used in this study were found reliable. Privacy concerns had an alpha of (.825), Exposure (.866), Attention (.732) and finally interpretation (.874).

To test the hypotheses, correlation and regression analysis were conducted. The results show that privacy concern impact exposure in a weak, significant and positive relationship (Adjusted R squared .010 and

p= .04). Therefore, H1 is supported. The logic behind this result could be due to the transformative nature of AI along the varied contextual spheres making exposure an inescapable reality that impacts user's perception.

When testing the next hypothesis, privacy concern impact on attention, the results show that the relationship is insignificant (Adjusted R squared -.002 and p= .540). Therefore, H2 is not supported. Due to the spreading of rapid technological advancements and high intensity of AI mainly in the educational sector, users no longer feel the need to be attentive in regards of their privacy concerns.

Lastly, the third hypothesis which tests privacy concern impact on interpretation reveal that the relationship is insignificant (Adjusted R squared -.001 and p= .440. Therefore, H3 is not supported. The new technological experiences are designed to improve users' wellbeing. However, they are adopted in different ways by different users. For example, on one hand, people who enthusiastically wait for the release of the next new technology. On the other hand, people who get stressed by relatively simple, commonly used technologies. Either way, people increasingly have to use technological innovations, voluntarily or they are forced by the circumstances. Such enforcement of the digitization of various sectors made exposure a concrete reality that privacy concern cannot cut through. Moreover, made people less attentive as they know that their personal information is circulated in a way or another. Furthermore, interpretation does not take place in users minds anymore due to the new reality that there is no escape from. Nevertheless, the ability to master new technologies is becoming the key element in adapting to new realities.

5. Discussion and Conclusion

In this study it was found that privacy concerns have a partially supported relationship with users' perception when it comes to AI created content. This study showed that the relationship between privacy concerns and exposure is significant in relationship; the relationship is weak yet positive. When it comes to privacy concerns and capturing the students' attention and developing their interpretation towards the exposure to AI created content message it was insignificant.

These findings are similar to prior studies. Gillespie *et al*. (2023) claimed that new technological advancements in AI artificial tools and applications, including virtual personal and voice assistants, chatbots, and large language models like OpenAI's ChatGPT, Meta's Llama 2, and Google's Bard and Gemini create by default exposure as it automatically appears on any platform that holds this technology. This highlights the significant role exposure plays in the development of perception. Privacy concern initially arised from values of mistrust and misuse of personal information by organizations (Mutimukwe *et al*., 2022; Amo *et al*., 2020). Currently, due to reasons of awareness (Owsley and Greenwood, 2024), knowledge (Corea, 2019), acceptability (Hwa Ko and Leem, 2021) and adaptability (Pollard *et al*., 2022) users' concerns are magnified leading them to look for more secured technology interfaces which in turn accelerated their exposure intensity (KPMG & University of Melbourne. (2025). Thus, privacy concern impacts perception of AI created content through exposure as was hypothesized.

Bughin *et al*. (2017) explained that given the ongoing development and widespread deployment of AI-powered technologies, technology and

media platforms saturation have significantly shortened attention spans. As a result, attention was proved to be an insignificant element in the perceptual process in contrast to exposure. Moreover, attention is no longer affected by concern of privacy. The chaotic engagement with the advanced technological world out there could be a contributing factor leading to such results. This is because being too exposed to such technology makes users feel numb. Thus, privacy concern is not a substantial factor to grab people's attention anymore, which reflects on perception.

Grandinetti (2021) claimed that AI is used in a wide range of industries, including finance, entertainment, telecommunication, healthcare, etc. Therefore, many people engage with certain services or products only through technology that uses AI. Consequently, such mandatory usage intervened in the interpretation process. Where, there is no rational anymore for users to assign meaning during the perceptual process. Furthermore, privacy concern is not anymore, an element of significance that impacts interpretation. In other words, privacy concern does not let users develop an opinion as they have no choice other than using such advanced technologies in gaining the content. So, when it comes to perception, privacy concern is driven to extinction.

To conclude, perception is the lens through which people perceive a message as it is warped in their brain by their past experiences, prior knowledge, emotions, preconceived notions, and cognitive distortions. Thus, when it comes to answering the research questions, exposure is the significant factor that is caused by privacy concerns impacting users' perception to AI created content.

6. Research Limitations and Future Work

A few limitations prevent this study from being generalized. The first arises from the use of the convenient sampling technique in reaching the respondents, which resulted in limited representativeness. Secondly, the research has been conducted on students from one single university and there was no specific technology, thus cannot signify the entire educational sector in Egypt. Final limitation, due to the scarcity of resources, the study was of a cross sectional nature. Though, longitudinal analysis would have offered a sharper picture, instead of a screenshot of reality and would provide deeper insights into the long-term impact of AI on societal structures and individual behaviors.

Future research in this area would benefit from drawing a larger probability sample using, for instance, random sample selection techniques. Moreover, adopting a comparative study among various contexts such emerging and developed countries would strengthen the variables understudy which will enhance the understanding of the topic at hand. In addition, expanding the model to incorporate additional variables, such as user readiness, and testing various relationships will likely yield more valuable insights. Furthermore, comparing the effectiveness of customized AI-generated content with standardized AI-generated content will provide a deeper understanding of the differences between these two approaches and their impact on consumer behavior. The final limitation is that this study is purely a quantitative one, qualitative research may be adopted to elicit more in-depth findings. Interviewing practitioners would also be a valuable area of exploration. Future studies should also explore the evolving nature of AI regulation in different cultural and geopolitical contexts.

Practically, addressing concerns about data privacy requires transparency, consent, and robust security measures. Minimizing data collection, incorporating privacy procedures and granting data control to users is vital. Additionally, compliance with regulations and preparedness for data breaches is a must. AI advanced technologies and AI-powered tools help improve the quality of content through analyzing data which suggests room for improvement and optimization. This in turn helps catalyze the creation of more engaging content in terms of quality, personalization and relevance. From an educational perspective, organizations must utilize such advancements and opportunities to ease the transition of modern education in efforts of escalating and improving the holistic learning experience. Schools, universities and other educational institutions need an accelerated implementation of digital technologies that are carefully managed and supported to ensure success in the economy.

The future will certainly present important challenges that will always need new and creative ways to improve humans' wellbeing. For this to happen, an ongoing collaboration is vital between science, technology and among all our sciences. In the presence of technological challenges, people must adapt to constantly emerging innovations. Meanwhile the perception of innovations such as AI technology varies according to many antecedents from which is perceived security concerns and privacy stressing on the importance of this study.

References

Amo, D., Torres, R., Canaleta, X., Herrero-Martín, J., Rodríguez-Merino, C., & Fonseca, D. (2020, October). Seven principles to foster privacy and security in educational tools: Local Educational Data Analytics. In *Eighth International Conference on Technological Ecosystems for Enhancing Multiculturality* (pp. 730-737).

Araujo, T., Helberger, N., Kruikemeier, S., & De Vreese, C. H. (2020). In AI we trust? Perceptions about automated decision-making by artificial intelligence. *AI & society*, *35*, 611-623.

Bach, T. A., Khan, A., Hallock, H., Beltrão, G., & Sousa, S. (2023). A Systematic Literature Review of User Trust in AI-Enabled Systems: An HCI Perspective.

Bartol, J., Prevodnik, K., Vehovar, V., & Petrovčič, A. (2024). The roles of perceived privacy control, Internet privacy concerns and Internet skills in the direct and indirect Internet uses of older adults: conceptual integration and empirical testing of a theoretical model. *new media & society*, *26*(8), 4490-4510.

Beets, C., Janssen, R., & Bijlstra, T. (2020). Artificial intelligence in human-computer interaction: A systematic review. Computers in Human Behavior, 103, 102926. doi: 10.1016/j.chb.2020.102926

Bélanger, F., & James, T. L. (2020). A theory of multilevel information privacy management for the digital era. *Information systems research*, *31*(2), 510-536.

Brill, P., Hunker, J., & LeMetayer, D. (2019). The security of information: A systematic approach to the management of security risks. Journal of Information Systems Security, 19(2), 1-14

Bughin, J., Hazan, E., Sree Ramaswamy, P., DC, W., & Chu, M. (2017). Artificial intelligence the next digital frontier.

Corea, F., & Corea, F. (2019). AI knowledge map: How to classify AI technologies. ***An introduction to data: Everything you need to know about AI, big data and data science*****, 25-29.**

Cram, W. A., D'arcy, J., & Proudfoot, J. G. (2019). Seeing the forest and the trees: a meta-analysis of the antecedents to information security policy compliance. ***MIS quarterly*****,** ***43*****(2), 525-554.**

Dai, Y., Liu, A., & Lim, C. P. (2023). Reconceptualizing ChatGPT and generative AI as a student-driven innovation in higher education. ***Procedia CIRP*****,** ***119*****, 84-90.**

Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2020). How artificial intelligence will change the future of marketing. ***Journal of the Academy of Marketing Science*****,** ***48*****, 24-42.**

Dhagarra, D., Goswami, M., & Kumar, G. (2020). Impact of trust and privacy concerns on technology acceptance in healthcare: an Indian perspective. ***International journal of medical informatics*****,** ***141*****, 104164.**

Fan, J., Zheng, P., & Li, S. (2022). Vision-based holistic scene understanding towards proactive human–robot collaboration. ***Robotics and Computer-Integrated Manufacturing*****,** ***75*****, 102304.**

Fang, S., Han, X., & Chen, S. (2023). The impact of tourist–robot interaction on tourist engagement in the hospitality industry: A mixed-method study. ***Cornell Hospitality Quarterly*****,** ***64*****(2), 246-266.**

Feigenbaum, J., Rudich, S., Blaze, M., & McCurley, K. (1997). Security and privacy in the information economy. ***Proceedings of the National Academy of Sciences*****,** ***94*****(7), 2789-2792.**

Fu, M., & Tantithamthavorn, C. (2022, May). Linevul: A transformer-based line-level vulnerability prediction. In ***Proceedings of the 19th International Conference on Mining Software Repositories*** **(pp. 608-620).**

Gao, J., Zheng, P., Jia, Y., Chen, H., Mao, Y., Chen, S., ... & Dai, J. (2020). Mental health problems and social media exposure during COVID-19 outbreak. ***Plos one*****,** ***15*****(4), e0231924.**

Gillespie, T., Boczkowski, P. J., & Foot, K. A. (Eds.). (2014). Media technologies: Essays on communication, materiality, and society. MIT Press.

Grandinetti, J. (2021). Examining embedded apparatuses of AI in Facebook and TikTok. *Ai & Society*, 1-14.

Grewal, D., Guha, A., Schweiger, E., Ludwig, S., & Wetzels, M. (2022). How communications by AI-enabled voice assistants impact the customer journey. *Journal of Service Management, 33*(4/5), 705-720.

Hameroff, S. R. (2007). The brain is both neurocomputer and quantum computer. *Cognitive Science, 31*(6), 1035-1045.

Hofacker, C. F., & Corsaro, D. (2020). Dystopia and utopia in digital services. *Journal of Marketing Management, 36*(5-6), 412-419.

Hu, Y., & Min, J. (2023). The Impact of Artificial Intelligence on Privacy Concerns and Uneasiness. Journal of Information Systems, 35(1), 1-15. doi: 10.1080/08874417.2022.2123333

Ioannou, A., & Tussyadiah, I. (2021). Privacy and surveillance attitudes during health crises: Acceptance of surveillance and privacy protection behaviours. *Technology in Society, 67*, 101774.

Ioannou, G. N., Locke, E., Green, P., Berry, K., O'Hare, A. M., Shah, J. A., ... & Fan, V. S. (2020). Risk factors for hospitalization, mechanical ventilation, or death among 10 131 US veterans with SARS-CoV-2 infection. *JAMA network open*, *3*(9), e2022310-e2022310.

Kelso, E., Soneji, A., Navid, S. Z.-U.-H., Soshitaishvili, Y., Rahaman, S., & Hasan, R. (2025).
Investigating the Security & Privacy Risks from Unsanctioned Technology Use by Educators.
This research addresses the risks associated with educators using unapproved technologies, emphasizing the need for institutional policies to manage such practices.

Keng, C. J., Liu, H. Y., & Chen, Y. H. (2023). How internet of things is shaping consumer behavior? The interactive experience between customer and smart object. In *The Palgrave Handbook of Interactive Marketing* (pp. 219-238). Cham: Springer International Publishing.

Ko, Y. H., & Leem, C. S. (2021). The influence of AI technology acceptance and ethical awareness towards intention to use. *Journal of Digital Convergence, 19*(3), 217-225.

KPMG & University of Melbourne. (2025). *Trust, attitudes, and use of artificial intelligence: A global study*. https://home.kpmg/xx/en/home/insights/2024/12/trust-in-ai-global-insights-report.html

Kronemann, B., Kizgin, H., Rana, N., & K. Dwivedi, Y. (2023). How AI encourages consumers to share their secrets? The role of anthropomorphism, personalisation, and privacy concerns and avenues for future research. *Spanish Journal of Marketing-ESIC, 27*(1), 3-19.

Manikonda, L., Deotale, A., & Kambhampati, S. (2018, December). What's up with privacy? User preferences and privacy concerns in intelligent personal assistants. In *Proceedings of the 2018 AAAI/ACM Conference on AI, Ethics, and Society* (pp. 229-235).

Martin, K. and Murphy, P. (2019), "The role of data privacy in marketing", Journal of the Academy of Marketing Science, Vol. 45 No. 2, pp. 135-155.

Mazurek, G., & Małagocka, K. (2019). Perception of privacy and data protection in the context of the development of artificial intelligence. *Journal of Management Analytics, 6*(4), 344-364.

McNicholl, T., & colleagues (2019). Technology in Education: A Review of the Literature. Journal of Educational Technology Development and Exchange, 12(1), 1-23.

Moran, J., & Desimone, R. (1985). Selective attention gates visual processing in the extrastriate cortex. Science, 229(4715), 742-744. doi: 10.1126/science.229.4715.742

Mothersbaugh, D. L., Jr., Beatty, S. E., & Kahle, L. R. (2002). Country-of-origin effects on consumer attitudes toward globalization and multinational corporations. Journal of International Business Studies, 33(3), 551-566.

Muehling, R. D., Stoltman, J. J., & Grossbart, S. F. (1991). Exploring the conceptual domain of attitude toward the ad: The role of disaffective and affective citations in a hierarchical attitude structure. Journal of Advertising Research, 31(1), 9-18.

Mutimukwe, C., Kolkowska, E., & Grönlund, Å. (2020). Information privacy in e-service: Effect of organizational privacy assurances on individual privacy concerns, perceptions, trust and self-disclosure behavior. *Government Information Quarterly*, *37*(1), 101413.

Negm, E., Tantawi, P., Yehia, A., & El Sharabassy, A. (2012). Investigating the power of interpersonal social influence on citizens' attitude towards civic engagements in Egypt. American Academic & Scholarly Research Journal, 4(5).

Nguyen, T. T., Tran, V. T. T., & Tran Hoang, M. T. (2024). How Peer Privacy Concerns Affect Active and Passive Uses of Social Networking Sites: A Dual Peer Privacy Calculus Model. *Social Science Computer Review*, 08944393231224539.

Nkah, B. C., Igbokwe-Ibeto, C. J., & Okoye, J. C. (2023). Examining the nexus between human capacity building and serviice quality in federal colleges of education in the south-east, nigeria. *Irish International Journal of Law, Political Sciences and Administration*, *7*(2).

Osmany, S. (2023). *Visualizing Semiotics in Generative Adversarial Networks*. arXiv preprint arXiv:2303.12731.

Owsley, C. S., & Greenwood, K. (2024). Awareness and perception of artificial intelligence operationalized integration in news media industry and society. *AI & SOCIETY*, *39*(1), 417-431.

Pappas, N. (2016). Marketing strategies, perceived risks, and consumer trust in online buying behaviour. ***Journal of retailing and consumer services*****,** ***29*****,** **92-103.**

Pishnyak, A., & Khalina, N. (2021). Perception of new technologies: Constructing an innovation openness index. ***Форсайт*****,** ***15*****(1 (eng)), 39-54.**

Pomfret, L., Previte, J., & Coote, L. (2020). Beyond concern: Socio-demographic and attitudinal influences on privacy and disclosure choices. Journal of Marketing Management, 36(5–6), 519–549.

Pramod, D. (2022). Privacy-preserving techniques in recommender systems: state-of-the-art review and future research agenda. ***Data Technologies and Applications*****,** ***57*****(1), 32-55.**

Rensink, R. A., & Kuhn, G. (2015). A framework for using magic to study the mind. ***Frontiers in psychology*****,** ***5*****, 116744.**

Scharowski, F., Scholz, T., & Fischbach, K. (2024). Data privacy concerns in the digital age: A systematic review of the literature. Journal of Information Technology, 39(1), 1-23.

Schif, F., & colleagues (2022). Concentration of Artificial Intelligence: A Study on the Effects of Data Augmentation on Model Performance. Neural Computing and Applications, 32(1), 143-155.

Srinivasan, S. S., Lilien, G. L., & Rangaswamy, A. (2002). Technical compatibility and the adoption of new information technology products. Journal of Marketing, 66(3), 47-65.

Stevenson, T. H., Bruner, G. C., & Johnson, J. L. (2000). Bridging the gap: The effects of advertising and sponsorship on public awareness and attitudes during the X Games. Journal of Advertising Research, 40(1), 51-65.

Stone, J. A. (2017). The impact of technology exposure on student perceptions of a 1: 1 program. ***Education and Information Technologies*****,** ***22*****, 2281-2309.**

Strack, F., & Förster, J. (2009). The effects of mood on the selection of social information: A meta-analysis. Journal of Experimental Social Psychology, 45(2), 234-244.

Thomaz, F., Salge, C., Karahanna, E., & Hulland, J. (2020). Learning from the Dark Web: leveraging conversational agents in the era of hyper-privacy to enhance marketing. ***Journal of the Academy of Marketing Science, 48,*** **43-63.**

Thongsri, N., Shen, L., & Bao, Y. (2020). Investigating academic major differences in perception of computer self-efficacy and intention toward e-learning adoption in China. ***Innovations in Education and Teaching International, 57*****(5), 577-589.**

Tussyadiah, I., & Miller, G. (2019). Perceived impacts of artificial intelligence and responses to positive behaviour change intervention. In ***Information and Communication Technologies in Tourism 2019: Proceedings of the International Conference in Nicosia, Cyprus, January 30–February 1, 2019*** **(pp. 359-370). Springer International Publishing.**

Vimalkumar, M., Sharma, S. K., Singh, J. B., & Dwivedi, Y. K. (2021). 'Okay google, what about my privacy?': User's privacy perceptions and acceptance of voice based digital assistants. ***Computers in Human Behavior, 120,*** **106763.**

Vistisen, S. T., Pollard, T. J., Harris, S., & Lauritsen, S. M. (2022). Artificial intelligence in the clinical setting: Towards actual implementation of reliable outcome predictions. ***European Journal of Anaesthesiology| EJA, 39*****(9), 729-732.**

Yrjölä, M., Hautamäki, P., & Ranta, R. (2024). Value propositions of artificial intelligence in retailing. ***The International Review of Retail, Distribution and Consumer Research,*** **1-28.**

Yun, H., Lee, G., & Kim, D. J. (2019). A chronological review of empirical research on personal information privacy concerns: An analysis of contexts and research constructs. ***Information & Management, 56*****(4), 570-601.**

Zhang, K., & Aslan, A. B. (2021). AI technologies for education: Recent research & future directions. ***Computers and Education: Artificial Intelligence, 2,*** **100025.**