

GENERATIVE ARTIFICIAL INTELLIGENCE (GAI) IN EDUCATION: THE ROLE OF ORGANIZING VISIONS (OVS) IN SHAPING THE ADOPTION AND DIFFUSION OF TECHNOLOGY INNOVATIONS IN OUR EDUCATIONAL COMMUNITY.

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Abstract

Exploring the early stages of organizing visions for the application of Generative Artificial Intelligence (GAI) in education is the goal of this paper. It looks at the ways in which these new ideas fit with established protocols. There are important scientific and practical ramifications for comprehending the early stages of these organizing visions and the establishment of consensus over formal criteria for GAI in education. This study examines the background of GAI in education, adding to the body of knowledge on the emergence of OVs in digital platforms. A thorough viewpoint on the early stages of GAI policy formation in an educational setting is provided by this study, which also offers insights into the consensus and recommendations from numerous reliable sources.

Keywords: Generative Artificial Intelligence, Organizing visions, AI in education, Educational information systems

Introduction

The broad societal acceptance of Artificial Intelligence (AI) signifies a major change in the underlying assumptions that underpin several fields, including education. The development of Generative Artificial Intelligence (GAI), as demonstrated by models like Gemini and GPT-4, has intensified the discussion over its potential and effects on education (Kasneci et al., 2023; Kishore et al., 2023; Chen et al., 2022). A 2024 quantitative study found that roughly half (51%) of youths between the ages of 14 and 22 reported using GAI at least once (Hopelab & Common Sense Media, 2024).

These GAI models demonstrate the ability to interpret textual content and generate human-like text, which can be utilized for personalized learning, automated feedback, and the creation of dynamic learning environments (Hina et al., 2025; Chen et al., 2022; Nguyen et al., 2020a). Approximately 62% of employees' working time is dedicated to language-related tasks. As a result, Large Language Models (LLMs) such as GPT-4 have the potential to influence nearly 40% of total working hours (Daugherty et al., 2023). Professionals initially adopted LLMs due to their significant capacity for processing natural language and generating information rapidly, which improved productivity and supported decision-making in digitally intensive workflows (e.g. Li et al., 2024). However, as studies showed that LLMs enhance repetitive activities, human judgment and group decision-making are still extremely valuable (Järvelä et al., 2025). Additionally, while GAI holds forth the

possibility of revolutionary advancements, there are equally significant risks, especially with regard to misuse and ethical issues (Nguyen et al., 2023; Holmes et al., 2021). Noted that education is under a lot of pressure to prepare students for the shifting demands of the workforce.

Examining emergent structures and processes that contribute to the creation of institutional standards is necessary due to the significant problems raised by the incorporation of GAI in educational environments (Swanson et al., 2025). A recent study, for example, found that GAI may promote excessive reliance on technology among students, which could result in "metacognitive laziness," a condition in which people become less adept at critical thinking and self-regulation of their learning processes (Fan et al., 2024). Because of GAI's advanced capabilities, students might be treated more as passive information consumers than active knowledge creators. In this regard, the ease of use provided by GAI might impede the mental effort required for meaningful learning. The quality and fairness of education are directly threatened by the possibility that GAI-generated content would spread prejudices, errors, and false information (Lund et al., 2023). It is imperative to carefully consider how communities organize their understanding and adoption of GAI, as well as the creation of guidelines to ensure its responsible use, given the complexity of GAI use in educational settings, including applications like ChatGPT. When implementing GAI, educational institutions including colleges and universities face operational and strategic challenges. Educational establishments are not yet entirely equipped to handle these issues, though. For example, a recent study found that less than a quarter of staff members believe their university has provided them with sufficient training to effectively engage with GAI, while more than three-quarters expressed a need for additional support (Lee et al., 2024). Hence the need for Organizing Vision.

Organizing Visions (OVs)

A conceptual framework for comprehending the adoption and integration of technological breakthroughs into an organization, community, or society is called Organizing Visions (OVs) (Bunduchi et al., 2020; Swanson and Ramiller, 1997; Swanson et al., 2025). An **organizing vision** refers to a *collective understanding* that provides meaning, legitimacy, and direction for the adoption and use of an innovation or technological idea within a community or industry (education). The term was first introduced by **Swanson and Ramiller (1997)** in the context of information systems innovation. They defined an organizing vision as "*a focal community idea for the application of information technology in organizations*" (p. 460). It serves as a shared interpretation that helps individuals and organizations make sense of new innovations, reducing uncertainty and guiding coordinated actions. Essentially, an organizing vision helps align diverse stakeholders such as technology vendors, consultants, users, and policymakers around a common understanding of what an innovation is, why it matters, and how it should be used (Swanson & Ramiller, 1997). It functions as a *sensemaking framework* that transforms a technological idea from something abstract into a socially constructed concept with practical meaning. Furthermore, **Currie (2004)** emphasized that an organizing vision does not remain static; it evolves over time as new interpretations emerge and as technologies mature. The organizing vision thus acts as a *dynamic discourse* that both shapes and is shaped by ongoing interactions among stakeholders. In practice, organizing visions play a critical role in technology diffusion and innovation management. For instance, in the adoption of

GAI, emerging digital platforms or enterprise systems, the organizing vision helps organizations rationalize their decisions and justify investments by aligning them with industry norms and perceived best practices (Ramiller & Swanson, 2003).

As technological innovations are introduced, OV's arise to construct meaning both within and across organizations (Swanson and Ramiller, 1997). A "complex community" of organizational actors engage in discourse to evaluate the potential discontinuity posed by the innovation which leads to the development of an OV (Swanson and Ramiller, 1997, p. 460). GAI constitutes a disruptive technological innovation, as its expanding influence in workplaces (e.g. Hessari et al., 2024; Heimbarg et al., 2025) and educational environments (e.g. Giannakos et al., 2024) prompts the need to reevaluate current practices. GAI qualifies as an innovation because it represents a fundamental breakthrough in technology and organizational practice, exemplified by its capacity to disrupt traditional models through radical new methods of creative content generation. In this context, Organizing Vision Theory (OVT) (Swanson and Ramiller, 1997) offers a valuable lens to examine the adoption and integration of GAI in education, highlighting how shared interpretations, framing, and collective action shape the trajectory of GAI. OVT comprises three functions (interpretation, legitimation, and mobilization) which frame the adoption of innovative technologies. Interpretation involves conveying the usefulness of innovative technologies to a broader community, legitimation involves demonstrating and debating its applicability to current challenges, and mobilization involves motivating community actors to adopt and diffuse technological innovations (Parameswaran et al., 2023). In the process of engaging with and comprehending technological innovations, OV's play a crucial role in recognizing potential benefits and drawbacks. Through discourse, the community "collectively interprets the innovation, legitimates it, and mobilizes the collective action necessary for its diffusion" (Miranda et al., 2022a, p. 1422).

Earlier studies have mostly focused on offline discourses (Kim and Miranda, 2018), newer studies show that OV functions appear differently in the digital sphere (Miranda et al., 2022a). The way OV's are created is changing because to digital channels, especially social media. Social media's participatory nature allows a wide range of actors to participate in quick, emergent, and decentralized discourse, in contrast to traditional institutional settings where consensus is formed through established authority structures framed around organizational justifications for adoption (Swanson et al., 2025). According to Amadoru et al. (2018), social media platforms are now a powerful discourse tool that enables a range of actors to actively participate in OV development.

The emergence of Generative Artificial Intelligence (GAI) in learning and teaching

The potential of Generative Artificial Intelligence (GAI) to revolutionize the teaching and learning process has garnered a lot of interest (Nguyen et al., 2024). A subclass of AI models known as GAI is distinguished by its capacity to forecast results or produce original content from input data. GAI can generalize knowledge across domains, making it significantly more versatile and able to respond to requests in a variety of scenarios than narrow AI, which is best at specialized, specified tasks. One immediate worry in teaching and learning is that students can depend on GAI to finish their tests with little effort. Students may avoid critical thinking and problem-solving exercises that are necessary for in-depth comprehension as a result of this dependence,

which might result in a shallow involvement with the learning process. Such practices could undermine the development of essential skills and competencies that assessments are designed to evaluate (Mao et al., 2024).

Despite these concerns, GAI also presents valuable opportunities to enhance learning and teaching experiences. In personalized learning, for instance, GAI models could be leveraged to create individualized learning experiences, customizing content based on learners' unique patterns, strengths, and weaknesses (Yang et al., 2024). This aspect of GAI is critical in addressing individual students' varied learning styles and paces, allowing for a more adaptive and responsive educational environment (Kasneci et al., 2023). Research demonstrates that GAI can significantly enhance learning efficiency and increase student engagement by providing customized content and exercises that adapt to each learner's specific needs (Chen et al., 2022; Yan, 2023). Recent research suggests that when introduced with careful instructional design, these technologies can improve writing quality, foster creativity, and promote reflection (e.g. Nguyen, 2024). Moreover, these technologies are instrumental in facilitating a more inclusive educational approach, catering to diverse learning needs and potentially reducing educational disparities (Nguyen et al., 2024, Nguyen et al., 2020b). With both crucial concerns and significant opportunities, the integration of GAI in education at the institutional level is complex, posing threats to academic integrity, challenging existing assessment methods, and necessitating curriculum reforms to address future skill demands. This has forced educational institutions to urgently find ways to embrace GAI to ameliorate the fears (Swanson et al., 2025). The advanced capabilities of GAI, combined with the inherent challenges of infrastructure compatibility, user training, and ethical considerations, highlight the necessity of understanding the development of OV. Gaining insights into OV enables a deeper understanding of how GAI, as an emerging technology, is embraced across organizations, communities, and societies, highlighting their critical role in steering technological advancements and shaping policy frameworks.

Organizing visions (OVs) for technological innovation

The study of technological advances is directly related to OV. According to Parameswaran et al. (2023), OV provides a macro-level framework for comprehending the acceptance, diffusion, and application of new technologies both inside and outside of an organization. Organizational decision-making and technology adoption are influenced by OV, which were first proposed by Swanson and Ramiller (1997) and include a community's common understanding and expectations of technological innovation. More broadly, complex communities participate in group discussions to facilitate the spread of innovation (Miranda et al., 2022a). In the context of GAI in education, where these tools have quickly gained popularity for individual use, these shared understandings are particularly evident by framing the shared narratives and interpretations that guide decision-making. OV may help educational institutions and stakeholders determine how best to adopt and integrate GAI into curricula and teaching practices. The role of OV in shaping the adoption and diffusion of technology innovations, although an evolving field (Kim and Miranda, 2018), has been well-documented (Swanson et al., 2025). The literature highlights the necessity of an OV to generate interest and foster a shared understanding of the potential implications of technological innovations (Ramiller and Swanson, 2003). Additionally, the presence of an OV has been shown to expedite the diffusion of technological innovations by providing a common language and reference point

(Amadoru et al., 2021). Swanson and Ramiller (1997) suggest that these visions are developed and spread through a process of interpretation and communication among stakeholders, including technology vendors, consultants, researchers, and industry analysts. This collective effort shapes the OV, which in turn, influences the perceptions and expectations of adopters (Barrett et al., 2013).

The success factors for OVs have also been explored in the above literature. The credibility and legitimacy of the stakeholders promoting the vision are critical for its acceptance (Wang and Ramiller, 2009). Furthermore, the alignment of the OV with organizational values, goals, and broader industry trends is essential for its effectiveness (Amadoru et al., 2021; Bunduchi et al., 2020). The relationship between an OV and the institutionalization of technological innovations, through changes to institutional processes and practices, has been examined in-depth (Swanson et al., 2025). A coherent OV can lead to the institutionalization of technological innovation by providing a shared understanding of its value, increasing its use and adoption within organizations (Parameswaran et al., 2023). In other words, through the lens of OVs, one can examine how communities coalesce around these possibilities, articulate benefits and risks, change their associated practices, and develop policies that encourage the effective application of such innovations (Swanson and Ramiller, 1997). This process, characterized by community-driven coordination and shared meaning-making, can illustrate how GAI is not merely introduced into educational contexts but socially constructed and diffused, thereby influencing long-term outcomes.

Beyond its crucial role in influencing how innovations are perceived, adopted, and implemented within various organizational contexts, OVs can also influence industry standards and policies (Wang and Swanson, 2007). It can inform policy-making processes, guide regulations, and set standards that govern the use and impact of technological innovations. However, there are limited empirical studies examining their direct impact on policy and standard-setting activities (Ramiller and Swanson, 2003).

Conclusion

GAI tools are some of the most revolutionary tools created in recent years, with unprecedented consequences for several aspects of the educational landscape. Innovative teaching methods, expedited administrative procedures, and fresh chances for individualized learning are all made possible by these technologies. Its transformative character, however, presents disruptive issues for educational institutions, teachers, and individual students, just like with earlier innovative tools. The necessity is obvious: rather than interfering with teaching and learning methods without rigorous supervision, GAI implementation should align with fundamental educational ideals and enhance them. However, there is a significant chance that these tools may be abused or taken advantage of because the current legal framework is unable to keep up with the rapid adoption of GAI, which outpaces that of many previous ones. Despite these contributions, several challenges remain in translating these guidelines into practice. Educational institutions vary widely in their capacity to adopt new technologies effectively, often due to disparities in resources and levels of digital literacy. Resistance from established stakeholders, combined with the swift pace of technological innovation, may further hinder the timely and effective implementation of these guidelines. Moreover, the absence of comprehensive

regulatory frameworks heightens the risk of misapplication, which could undermine the intended benefits of GAI in education.

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