

How Sensemaking Theory Can Guide Educators in Understanding and Managing the Impact of Artificial Intelligence

Dr. Lyssette Hawthorne-Wilson

The Mico University College

Abstract

The rapid emergence of artificial intelligence (AI) has generated profound uncertainty within educational systems. While some educators view AI as an opportunity for innovation, others experience anxiety regarding professional identity, ethics, and control over learning processes. This paper argues that the challenge is not purely technological but interpretive. Drawing on sensemaking theory, the study explains how educators construct meaning during disruption and how these interpretations influence institutional responses. By examining identity, social interaction, and enacted environments, the paper proposes that structured opportunities for collective interpretation can transform fear into informed action. The discussion concludes with implications for leadership, professional development, and policy formation, particularly within contexts where resources and guidance may be uneven. Sensemaking provides a pathway through which AI adoption becomes a process of learning rather than reaction.

Keywords:

artificial intelligence, sensemaking, educational change, leadership, professional identity

Introduction

Artificial intelligence has rapidly transitioned from a speculative concept to an operational reality within educational systems. What once appeared as distant automation is now embedded in everyday pedagogical practices, including lesson preparation, assessment design, feedback generation, student support, and administrative decision-making. Large language models and adaptive systems are increasingly accessible to educators and learners alike, often without formal institutional mediation. This pace and scale of change have created a moment of profound disruption within education, challenging long-standing assumptions about knowledge, authorship, expertise, and professional responsibility.

While much scholarly and policy-oriented discourse has focused on the capabilities and limitations of AI tools, such discussions frequently underestimate the human dimension of technological change. Educators are not passive recipients of innovation. They are professionals whose beliefs, identities, and values shape how technologies are interpreted and enacted. Consequently, the introduction of AI has produced a wide spectrum of responses ranging from optimism and experimentation to anxiety, resistance, and moral concern. These divergent responses cannot be adequately explained by technical competence alone.

Educational institutions, traditionally structured around stable routines and professional norms, are particularly sensitive to disruptions that destabilize meaning. Teaching has long been understood as a human-centred activity grounded in judgment, relational interaction, and ethical responsibility. The emergence of AI challenges these understandings by introducing systems that can generate content, simulate reasoning, and perform tasks previously associated with human expertise. For many educators, the central question is therefore not whether AI works, but what its presence signifies for the nature of teaching and learning. In this context, AI can be understood as a disruptive force similar to a sudden environmental shock. Its arrival demands rapid interpretation under conditions of uncertainty, limited guidance, and uneven institutional preparedness. Educators must decide how to respond before clear norms or policies are fully established. Such moments are fertile ground for sensemaking, the process through which individuals and groups construct meaning in order to act.

Despite growing interest in AI adoption and ethical governance in education, comparatively little attention has been paid to how educators make sense of AI during periods of transition. Existing literature often emphasizes frameworks for responsible use, technical training, or regulatory compliance. While valuable, these approaches assume a level of shared understanding that frequently does not exist in practice. Without addressing how educators interpret AI in relation to their professional identities and institutional contexts, implementation efforts risk superficial compliance or unproductive resistance.

This paper argues that sensemaking theory provides a powerful lens for understanding and guiding educators' responses to artificial intelligence.

By focusing on interpretation, identity, and social interaction, sensemaking explains why similar technologies produce different outcomes across settings and why leadership narratives play a decisive role in shaping practice. Applying this framework allows AI integration to be reframed not as a binary choice between adoption and rejection, but as an ongoing process of meaning construction.

The purpose of this paper is therefore to examine how sensemaking theory can guide educators in understanding and managing the impact of artificial intelligence. By conceptualizing AI as an interpretive challenge rather than solely a technical innovation, the paper contributes to scholarship on educational change, leadership, and professional learning. It further offers practical implications for institutions seeking to support educators through periods of technological disruption in a manner that is ethical, sustainable, and contextually responsive.

Artificial Intelligence as Disruption in Education

Educational institutions have long evolved in response to social, economic, and technological developments. From the introduction of print to the expansion of digital networks, each transformation has required adaptation in curriculum, pedagogy, and governance. However, the emergence of artificial intelligence represents a qualitatively different moment. Unlike earlier tools that primarily extended human capacity, AI increasingly performs tasks associated with cognition itself, including writing, analysis, translation, and problem solving. This shift unsettles deeply rooted assumptions about what it means to know, to teach, and to learn.

The disruptive nature of AI is evident in the speed with which it has entered professional life. Applications capable of producing essays, generating lesson materials, summarizing research, and simulating dialogue are available directly to students and teachers, often preceding institutional policy or ethical guidance. As a result, educators are compelled to make immediate judgments about acceptable use without the benefit of established norms. The absence of consensus creates ambiguity, and ambiguity intensifies the demand for interpretation. Research in AI and education consistently points to both transformative potential and significant risk (Holmes, Bialik, & Fadel, 2022; Luckin et al., 2016). Proponents highlight opportunities for personalized learning, real-time feedback, administrative efficiency, and expanded access to educational resources.

At the same time, critics raise concerns about data privacy, algorithmic bias, erosion of critical thinking, and the commodification of knowledge. Importantly, these competing narratives circulate simultaneously, often leaving educators uncertain about which vision should guide practice.

Disruption is not simply about the presence of new technology; it is about the destabilization of expectations. Teachers rely on implicit agreements regarding authorship, effort, and evaluation. AI complicates these agreements by blurring boundaries between assistance and substitution. When a machine can produce coherent academic text, the criteria by which learning is demonstrated require reconsideration. Assessment, a central organizing function of education, therefore becomes a site of tension.

Professional authority is also affected. Historically, educators have been regarded as curators and transmitters of knowledge. AI systems that generate explanations or recommend instructional strategies may appear to compete with this role. Some teachers interpret such capabilities as supportive augmentation, while others perceive encroachment upon professional expertise. The resulting emotional responses range from curiosity to defensiveness. Furthermore, AI introduces new temporal dynamics. Decisions that once unfolded gradually must now be made rapidly. Institutional deliberation struggles to keep pace with technological innovation, creating gaps between availability and regulation. In these gaps, informal practices develop. Educators experiment privately, share discoveries with colleagues, and form localized norms that may or may not align with emerging policy. What begins as individual adaptation can quickly become organizational culture.

The disruption extends beyond classrooms into leadership and governance. Administrators must balance innovation with accountability, respond to parental and societal expectations, and anticipate reputational risk. Public discourse frequently amplifies extreme scenarios, portraying AI either as revolutionary solution or existential threat. Such polarization complicates careful deliberation and increases pressure for visible action.

Because AI challenges knowledge production, assessment integrity, professional identity, and institutional authority simultaneously, it generates a multi-layered disturbance. It is therefore insufficient to treat adoption as a technical training problem. The central issue becomes how educators interpret the significance of these changes and how those interpretations guide behaviour.

Understanding AI as disruption highlights the importance of frameworks capable of explaining how meaning is constructed under uncertainty. This recognition leads directly to sensemaking, which provides tools for analyzing how professionals notice change, build explanations, and enact responses in evolving environments. Educational institutions have long evolved in response to social, economic, and technological developments. From the introduction of print to the expansion of digital networks, each transformation has required adaptation in curriculum, pedagogy, and governance. However, the emergence of artificial intelligence represents a qualitatively different moment. Unlike earlier tools that primarily extended human capacity, AI increasingly performs tasks associated with cognition itself, including writing, analysis, translation, and problem solving. This shift unsettles deeply rooted assumptions about what it means to know, to teach, and to learn.

The disruptive nature of AI is evident in the speed with which it has entered professional life. Applications capable of producing essays, generating lesson materials, summarizing research, and simulating dialogue are available directly to students and teachers, often preceding institutional policy or ethical guidance. As a result, educators are compelled to make immediate judgments about acceptable use without the benefit of established norms. The absence of consensus creates ambiguity, and ambiguity intensifies the demand for interpretation. Research in AI and education consistently points to both transformative potential and significant risk. Proponents highlight opportunities for personalized learning, real-time feedback, administrative efficiency, and expanded access to educational resources.

At the same time, critics raise concerns about data privacy, algorithmic bias, erosion of critical thinking, and the commodification of knowledge. Importantly, these competing narratives circulate simultaneously, often leaving educators uncertain about which vision should guide practice.

Disruption is not simply about the presence of new technology; it is about the destabilization of expectations. Teachers rely on implicit agreements regarding authorship, effort, and evaluation. AI complicates these agreements by blurring boundaries between assistance and substitution. When a machine can produce coherent academic text, the criteria by which learning is demonstrated require reconsideration. Assessment, a central organizing function of education, therefore becomes a site of tension.

Professional authority is also affected. Historically, educators have been regarded as curators and transmitters of knowledge. AI systems that generate explanations or recommend instructional strategies may appear to compete with this role. Some teachers interpret such capabilities as supportive augmentation, while others perceive encroachment upon professional expertise. The resulting emotional responses range from curiosity to defensiveness.

Furthermore, AI introduces new temporal dynamics. Decisions that once unfolded gradually must now be made rapidly. Institutional deliberation struggles to keep pace with technological innovation, creating gaps between availability and regulation. In these gaps, informal practices develop. Educators experiment privately, share discoveries with colleagues, and form localized norms that may or may not align with emerging policy. What begins as individual adaptation can quickly become organizational culture.

The disruption extends beyond classrooms into leadership and governance. Administrators must balance innovation with accountability, respond to parental and societal expectations, and anticipate reputational risk. Public discourse frequently amplifies extreme scenarios, portraying AI either as revolutionary solution or existential threat. Such polarization complicates careful deliberation and increases pressure for visible action. Because AI challenges knowledge production, assessment integrity, professional identity, and institutional authority simultaneously, it generates a multi-layered disturbance. It is therefore insufficient to treat adoption as a technical training problem. The central issue becomes how educators interpret the significance of these changes and how those interpretations guide behaviour.

Understanding AI as disruption highlights the importance of frameworks capable of explaining how meaning is constructed under uncertainty. This recognition leads directly to sensemaking, which provides tools for analyzing how professionals notice change, build explanations, and enact responses in evolving environments.

Theoretical Framework: Sensemaking

Periods of uncertainty invite interpretation. When familiar routines fail or expectations are disrupted, individuals and organizations must construct explanations that allow them to continue acting. Sensemaking provides a powerful framework for understanding this process (Weick, 1995). The theory shifts attention away from the search for objective certainty and toward the ways in which actors build plausible meanings in order to move forward. At its core, sensemaking proposes that reality in organizations is not simply discovered; it is enacted through interpretation. People notice cues, select certain elements for attention, and weave them into narratives that appear coherent. These narratives guide subsequent behaviour, which in turn produces new cues, creating an ongoing cycle of interpretation and action. In this way, understanding and doing are inseparable.

A central element of sensemaking is identity. How individuals interpret events depends on who they believe themselves to be. Professionals ask, often implicitly, what the situation means for someone in their position. For educators, identity may involve commitments to expertise, care, authority, mentorship, or moral stewardship. When artificial intelligence enters the workplace, these identity anchors influence whether the technology is viewed as assistance, threat, or irrelevance. Interpretation is therefore deeply personal while simultaneously shaped by collective expectations.

Sensemaking is also inherently social. Meanings are negotiated through conversation, shared experiences, and institutional discourse. Staff meetings, workshops, online forums, and informal exchanges become arenas where competing explanations circulate. Over time, certain interpretations gain prominence, often because they are endorsed by leaders, align with prevailing values, or reduce anxiety. These dominant narratives gradually solidify into taken-for-granted assumptions that structure practice. Subsequent scholarship has extended the original formulation by highlighting emotion, power, and leadership (Gioia et al., 2013; Maitlis & Christianson, 2014). Researchers argue that sensemaking unfolds within contexts where authority influences which voices are heard and which interpretations are

legitimized. Leaders, therefore, play a critical role not only in making decisions but also in shaping the stories through which decisions become meaningful. Disruption becomes a catalyst for redefining professional purpose.

Another significant insight from sensemaking research is that actors seek plausibility rather than accuracy (Weick, 1995). In fast-moving situations, waiting for perfect information is impractical. Instead, individuals adopt explanations that are sufficiently credible to permit action. This principle is highly relevant to AI in education, where technologies evolve more rapidly than research consensus or regulatory frameworks. Educators must act despite incomplete knowledge, relying on narratives that make uncertainty manageable. Importantly, sensemaking does not imply passive reaction. Through interpretation, individuals actively participate in constructing the environments they inhabit. Policies, routines, and technologies become meaningful only as they are integrated into shared understandings. Thus, the outcomes of AI implementation are shaped not solely by technical design but by how educators collectively define what responsible use looks like.

Applying sensemaking theory to artificial intelligence allows the present moment to be understood as an interpretive challenge. Rather than asking only how AI should be used, the framework encourages inquiry into how educators come to believe certain uses are appropriate or inappropriate. It invites attention to dialogue, identity, and leadership as mechanisms through which stability can be rebuilt after disruption.

By foregrounding interpretation, sensemaking provides both analytical depth and practical guidance. It explains variation in responses across institutions and highlights pathways through which leaders can support constructive engagement. The framework therefore offers a bridge between abstract theory and everyday professional decision-making. Periods of uncertainty invite interpretation. When familiar routines fail or expectations are disrupted, individuals and organizations must construct explanations that allow them to continue acting. Sensemaking provides a powerful framework for understanding this process. The theory shifts attention away from the search for objective certainty and toward the ways in which actors build plausible meanings in order to move forward.

At its core, sensemaking proposes that reality in organizations is not simply discovered; it is enacted through interpretation. People notice cues, select certain elements for attention, and weave them into narratives that appear coherent. These

narratives guide subsequent behaviour, which in turn produces new cues, creating an ongoing cycle of interpretation and action. In this way, understanding and doing are inseparable. A central element of sensemaking is identity. How individuals interpret events depends on who they believe themselves to be. Professionals ask, often implicitly, what the situation means for someone in their position. For educators, identity may involve commitments to expertise, care, authority, mentorship, or moral stewardship. When artificial intelligence enters the workplace, these identity anchors influence whether the technology is viewed as assistance, threat, or irrelevance. Interpretation is therefore deeply personal while simultaneously shaped by collective expectations.

Sensemaking is also inherently social. Meanings are negotiated through conversation, shared experiences, and institutional discourse. Staff meetings, workshops, online forums, and informal exchanges become arenas where competing explanations circulate. Over time, certain interpretations gain prominence, often because they are endorsed by leaders, align with prevailing values, or reduce anxiety. These dominant narratives gradually solidify into taken-for-granted assumptions that structure practice. Subsequent scholarship has extended the original formulation by highlighting emotion, power, and leadership. Researchers argue that sensemaking unfolds within contexts where authority influences which voices are heard and which interpretations are legitimized. Leaders, therefore, play a critical role not only in making decisions but also in shaping the stories through which decisions become meaningful. Disruption becomes a catalyst for redefining professional purpose.

Another significant insight from sensemaking research is that actors seek plausibility rather than accuracy. In fast-moving situations, waiting for perfect information is impractical. Instead, individuals adopt explanations that are sufficiently credible to permit action. This principle is highly relevant to AI in education, where technologies evolve more rapidly than research consensus or regulatory frameworks. Educators must act despite incomplete knowledge, relying on narratives that make uncertainty manageable.

Importantly, sensemaking does not imply passive reaction. Through interpretation, individuals actively participate in constructing the environments they inhabit. Policies, routines, and technologies become meaningful only as they are integrated into shared understandings.

Thus, the outcomes of AI implementation are shaped not solely by technical design but by how educators collectively define what responsible use looks like. Applying sensemaking theory to artificial intelligence allows the present moment to be understood as an interpretive challenge.

Rather than asking only how AI should be used, the framework encourages inquiry into how educators come to believe certain uses are appropriate or inappropriate. It invites attention to dialogue, identity, and leadership as mechanisms through which stability can be rebuilt after disruption.

Sensemaking gives analytical depth as well as practical direction by focusing on interpretation. It examines differences in responses across institutions and identifies routes for leaders to foster constructive involvement. As a result, the framework bridges the gap between abstract theory and practical professional decision-making.

Educators Interpreting AI

The introduction of artificial intelligence into educational settings rarely begins with formal policy. More often, it starts with exposure. A teacher encounters a demonstration, a student submits machine-assisted work, or a colleague shares a promising application. These moments function as cues that signal potential change. Yet cues do not carry inherent meaning. They require interpretation, and interpretation is shaped by prior experience, institutional culture, and professional identity (Weick, 1995). Educators therefore engage in active efforts to determine what AI represents. Some interpret it as an efficiency tool capable of reducing workload through automated drafting, resource generation, or administrative support. Others frame it as a challenge to academic integrity or as a threat to the authenticity of learning. Between these poles lies a wide spectrum of nuanced positions that evolve through dialogue and practice (Maitlis & Christianson, 2014).

Sensemaking research reminds us that individuals rarely interpret events in isolation. Teachers observe how peers respond, listen to administrative messaging, and follow wider media narratives. Through conversation, informal consensus begins to emerge. Statements such as AI is acceptable for brainstorming but not for final submissions or AI can assist differentiation become shared reference points.

These provisional agreements allow action to proceed even when uncertainty remains (Gioia et al., 2013). Emotion plays an important role in these processes. Excitement, curiosity, fear, and skepticism coexist, sometimes within the same individual. A lecturer may admire the speed of content generation while simultaneously worrying about diminishing student effort. Such ambivalence is not evidence of confusion but a natural feature of meaning construction during change (Maitlis & Christianson, 2014). Emotional responses often signal which aspects of the situation demand further clarification.

Interpretation is also influenced by educators' understandings of their professional responsibilities. Teachers who view their role primarily as facilitating learning may welcome AI as a supportive partner. Those who define their authority through control of knowledge may perceive erosion of status. Consequently, reactions to AI reveal underlying assumptions about pedagogy that may have remained unexamined prior to disruption. As educators experiment with AI, interpretations are revised. Successful outcomes strengthen narratives of usefulness, while problematic experiences reinforce caution. Meaning evolves through interaction with practice (Weick, 1995).

Institutions further shape interpretation by the signals they send. Silence may be read as permission or neglect. Restrictive policies may generate underground experimentation. Encouraging guidelines, accompanied by professional learning opportunities, often legitimize cautious exploration. In each case, behaviour reflects not only the technology itself but the meanings attached to it. Importantly, sensemaking is ongoing. Educators continuously update their understandings as new applications emerge and as colleagues share experiences. What initially appears radical may, over time, become routine. The unfamiliar becomes integrated into normal professional life because workable narratives stabilize expectations.

It is evident from looking at how educators view AI that adoption is neither automatic nor entirely logical. It is the result of group attempts to establish structure in the face of uncertainty. By acknowledging this process, organizations can shift from narrow discussions about whether AI should be welcomed or opposed to more fruitful discussions about how meaning might be properly created.

From Interpretation to Management

If artificial intelligence answers are affected by meaning creation, effective management cannot be based merely on technical regulation or infrastructure investment. Policies, training manuals, and procurement strategies are important, but they only have an impact when educators see them as genuine, relevant, and consistent with professional principles (Weick, 1995). Leadership must consequently engage not only with implementation but also with the interpretive environments in which it takes place.

Sensemaking scholarship suggests that coordinated action becomes possible when participants share narratives that render uncertainty manageable (Gioia et al., 2013). In the absence of such narratives, individuals default to personal assumptions, producing fragmented or contradictory practices. Managing AI, therefore, begins with cultivating spaces where interpretation can be examined collectively. Structured dialogue is one of the most powerful tools available to leaders. Workshops, faculty forums, and collaborative inquiry groups allow educators to articulate hopes and fears, compare experiences, and negotiate emerging norms. These conversations legitimize uncertainty as a professional condition rather than a personal failure (Maitlis & Christianson, 2014). Leadership communication also plays a decisive role. Messages that frame AI exclusively as threat may intensify defensiveness, while narratives of inevitable replacement can erode morale. Alternatively, framing AI as a resource that requires human judgment reinforces professional agency. In this sense, leaders participate directly in shaping the meanings that guide behaviour.

Another dimension of management involves experimentation. Pilot projects and staged implementation provide opportunities for learning without excessive risk. These initiatives generate local evidence that can refine institutional narratives and transform abstract debate into concrete experience (Gioia et al., 2013).

Professional development must also move beyond technical instruction toward reflective engagement. Opportunities to discuss ethical implications, pedagogical alignment, and student impact help educators integrate AI into their existing value frameworks. When technology is connected to purpose, it becomes more intelligible and less threatening.

Management, in this view, is not about eliminating ambiguity but about reducing it to workable levels. Through sustained dialogue, guided experimentation, and value-oriented communication, leaders help stabilize interpretations that support constructive engagement. Educational leaders gain traction by acknowledging that the impact of AI is determined by how it is interpreted. They can impact trajectories not only by restricting access to technology, but also by shaping the meanings with which technology is integrated into organizational life.

Institutional and Leadership Implications

Understanding artificial intelligence as an interpretive challenge carries significant consequences for how institutions design policy, allocate resources, and prepare professionals. If adoption depends on meaning rather than mere availability, then leadership must attend to the social infrastructures through which meaning is formed (Weick, 1995). Institutions frequently respond to innovation by prioritizing regulation. Guidelines concerning academic integrity, data protection, and acceptable use are essential. However, rules alone cannot produce thoughtful engagement. When policies are introduced without accompanying opportunities for dialogue, educators may perceive them as externally imposed constraints rather than collective commitments (Maitlis & Christianson, 2014).

A sensemaking perspective encourages leaders to treat policy as part of an ongoing conversation. Inviting educators into the interpretive process enhances legitimacy and fosters shared ownership. When professionals recognize their perspectives within institutional narratives, alignment becomes more sustainable (Gioia et al., 2013). Leadership preparation and teacher education programs also assume renewed importance. Future educators must be equipped not only with technical competencies but with the capacity to navigate ambiguity and participate in collective meaning construction.

Institutions may further benefit from cultivating distributed leadership structures. Local interpreters translate broad strategy into everyday activity, mediating between policy aspiration and practical feasibility. Another implication concerns organizational learning. Because AI technologies evolve rapidly, definitive solutions are unlikely to remain stable. Institutions must therefore develop mechanisms for continuous review so that adaptation becomes routine.

Public accountability adds additional complexity. Leaders must communicate how AI aligns with institutional mission while addressing societal concerns. Transparent explanation of decision processes can build trust and strengthen legitimacy. Ultimately, leadership implications extend beyond immediate management of AI. By investing in the processes through which educators construct understanding together, organizations enhance resilience and prepare for future disruptions.

Conclusion

The expansion of artificial intelligence within education has introduced a period of accelerated uncertainty. Technologies capable of generating knowledge artefacts and reshaping interaction challenge established assumptions about expertise and responsibility. Yet the diversity of institutional responses demonstrates that outcomes are shaped by interpretation rather than technical properties alone.

This paper contends that sensemaking provides an effective framework for guiding such interpretation (Weick, 1995). The theory explains why comparable innovations can have diverse outcomes across settings by emphasizing identification, social interaction, plausibility, and enactment (Maitlis & Christianson, 2014). Meaning becomes the channel via which technological futures are discussed.

Viewing AI through a sensemaking lens reframes management from control to cultivation. Leaders influence adoption by shaping conversations through which educators develop shared understanding.

Dialogue and reflective learning create conditions in which uncertainty can be navigated responsibly (Gioia et al., 2013). The implications extend to institutional design and professional preparation. Building capacity for collective interpretation enhances resilience in the face of continuing innovation. Sensemaking becomes a strategic resource for sustainable development.

Artificial intelligence will continue to transform education. The decisive question is how educators will understand it. When institutions invest in shared interpretation, disruption can become an opportunity for renewal rather than fragmentation.

References

- [1] Gioia, D. A., Patvardhan, S. D., Hamilton, A. L., & Corley, K. G. (2013). Organizational identity formation and change. *Academy of Management Annals*, 7(1), 123–193.
- [2] Holmes, W., Bialik, M., & Fadel, C. (2022). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign.
- [3] Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. (2016). *Intelligence unleashed: An argument for AI in education*. Pearson.
- [4] Maitlis, S., & Christianson, M. (2014). Sensemaking in organizations: Taking stock and moving forward. *Academy of Management Annals*, 8(1), 57–125.
- [5] Weick, K. E. (1995). *Sensemaking in organizations*. Sage.