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# Intuition as a foundational human competence for creativity, ethics, and professional judgment in education in the age of artificial intelligence

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## Abstract

Intuition is often treated as an imprecise or secondary form of knowledge, yet research across psychology, neuroscience, and education demonstrates that it plays a central role in human judgment. In the context of artificial intelligence (AI), this capacity becomes increasingly significant as analytical and predictive tasks shift toward automated systems. The article explores intuition as a foundational human competence that supports creativity, ethical discernment, and rapid decision-making in complex environments. A narrative literature review was conducted to synthesize classical philosophical perspectives with recent empirical findings from cognitive science, neuroscience, professional studies, and human–AI interaction. Evidence shows that intuition operates as an embodied, experience-based process that enables individuals to recognize patterns, anticipate possibilities, and respond to uncertainty with contextual sensitivity. Studies further indicate that intuition improves through deliberate practice, feedback, and reflective learning. Recent work in human–computer interaction demonstrates that the most effective outcomes arise when intuitive human judgment is combined with algorithmic analysis, forming what scholars call hybrid intelligence. The article argues that intuition should be explicitly recognized within education and training as a learnable skill that complements analytical and digital literacies. Strengthening intuitive competence is essential for sustaining human agency, professional responsibility, and creativity in AI-rich environments.

**Keywords:** Artificial intelligence, Creativity, Decision-making, Education, Embodied cognition, Human–AI interaction, Intuition, Professional judgment.

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## Contents

**Contribution of this paper to the literature**

This article brings together insights from several fields to show that intuition is a learnable human skill that complements analytical and emotional intelligence in the age of AI. It explains how intuition works, why it matters, and how cultivating it alongside algorithmic thinking can strengthen creativity, ethics, and human agency.

## 1. Introduction

Intuition has often been regarded as vague or mysterious; however, research in psychology, neuroscience, philosophy, and education demonstrates that it is a distinct form of knowing that complements rational analysis. The rise of artificial intelligence (AI) in the twenty-first century has increased awareness of this role. Algorithms are highly effective at analysis, pattern recognition, and prediction (Brynjolfsson & McAfee, 2017), but precisely because machines excel at these tasks, the human capacity to navigate uncertainty, synthesize complex information, and reach quick yet meaningful judgments becomes even more critical.

International organizations underline this need. UNESCO (2021), UNESCO (2023), UNESCO (2024), OECD (2019), and OECD (2023) identify adaptability, creativity, and ethical judgment as key skills for the digital age. They rarely use the word *intuition*, but the qualities they describe, such as anticipation, discernment, and flexible response in uncertain conditions, are closely linked to intuitive judgment (Dane & Pratt, 2007; Hogarth, 2010). Intuition, therefore, appears not as a secondary trait but as a professional competence that education and training should strengthen.

Research in recent years has added a new perspective. In computer science, attempts are made to model parts of intuitive reasoning, such as intuitive physics or mathematical insight (Davies et al., 2021; Piloto, Weinstein, Battaglia, & Botvinick, 2022). These efforts show progress, but they also reveal important limitations: the aspects that machines can approximate remain narrow and limited. Human intuition involves bodily signals, emotions, and values that AI cannot reproduce. At the same time, studies in management, human–computer interaction, and education show that human intuition is essential for how people use AI. Trust in algorithmic systems often depends on whether their recommendations fit intuitive sense-making (Chen, Liao, Wortman Vaughan, & Bansal, 2023), and the most effective results come when machine analysis and human intuition are combined (Abbasi, Bilal, & Rasheed, 2022; Dellermann, Ebel, Söllner, & Leimeister, 2019).

The aim of this article is to highlight intuition as a key human skill that becomes even more valuable in the era of artificial intelligence. By linking classical theories with contemporary empirical studies and drawing on insights from education and professional practice, the article positions intuition as a foundation for human agency, creativity, and ethical reasoning in technology-rich environments.

## 2. Methodology

This article adopts a narrative literature review approach (Baumeister & Leary, 1997; Snyder, 2019). This choice reflects the conceptual and cross-disciplinary character of the subject. Intuition is addressed in philosophy as a form of knowing, in psychology as a mode of decision-making, in neuroscience as an embodied process, and in education as a dimension of professional judgment. A systematic review would risk excluding traditions and accounts that remain central to understanding this multifaceted phenomenon.

The review process unfolded in three steps. First, classical contributions that continue to shape thinking about intuition were identified, such as Polanyi's (1966) theory of tacit knowledge, Jung's (1921) typology of psychological functions, and Kahneman's (2011) dual-system model of thought. Second, contemporary psychological and neuroscientific studies offering empirical grounding were examined, including research on recognition-primed decision-making (Klein, 1999; Sadler-Smith, 2023) and interoception (Craig, 2002). Third, works from education, organizational studies, and technology were integrated to highlight the role of intuition in professional practice and, more recently, in relation to AI (Chen et al., 2023; Hogarth, 2010; Huang & Rust, 2018; Vanlommel, 2018). The literature search combined electronic databases and targeted manual exploration. Academic sources were identified through Scopus, Web of Science, ERIC, and PsycINFO, complemented by Google Scholar for citation tracking and recent policy papers. Inclusion criteria required that studies explicitly address intuition as a form of knowledge, decision-making, or embodied process, or explore its relation to creativity, ethics, or human-AI interaction. Sources lacking conceptual or empirical grounding, or using the term merely metaphorically, were excluded. The scope of the review is selective rather than exhaustive, reflecting the conceptual nature of the topic. Sources were prioritized for their conceptual clarity, empirical strength, or direct relevance to the challenges of education and training in the AI era. The aim is to build a coherent foundation for further inquiry and to argue for intuition as a competence that complements analytical and emotional intelligence. By also including recent studies on AI, the review acknowledges how new technologies both challenge and illuminate the unique role of human intuition.

## 3. Understanding Intuition

Intuition has been interpreted in different ways across philosophy, psychology, neuroscience, and professional studies. These diverse perspectives do not contradict one another but instead highlight different layers of the phenomenon. What they share is the recognition that intuition represents a mode of knowing that is rapid, often non-verbal, and rooted in experience or embodied processes. Understanding these traditions is important for clarifying what intuition is, how it can be studied, and why it is relevant for professional practice in the era of artificial intelligence.

### *3.1. Schools of Thought*

In philosophy, intuition has often been described as direct insight into truth or meaning. Polanyi (1966)'s theory of tacit knowledge emphasizes that much of human knowledge operates below the level of explicit

articulation. Jung (1921) placed intuition among the four fundamental psychological functions, presenting it as the ability to perceive possibilities beyond the given facts.

Psychology and cognitive science have tended to frame intuition within dual-process theories. Kahneman (2011) defined it as "System 1" thinking: fast, automatic, and associative, in contrast to the slower and more deliberate "System 2." Later research argues that intuitive judgments are not inherently flawed but become more reliable with expertise (Dane & Pratt, 2007). Klein's (1999) work on recognition-primed decision-making showed that firefighters, nurses, and other experts often act intuitively by recognizing patterns they cannot fully verbalize.

Neuroscience has provided evidence that intuition is not only cognitive but also embodied. Studies on interoception show that bodily signals such as heartbeat, gut feelings, and skin conductance can influence decision-making (Craig, 2002). Neuroimaging research further indicates that intuitive judgments involve distinct neural activations compared with analytical reasoning, often engaging prefrontal and parietal areas (Volz & Von Cramon, 2006). Damasio's (1994) *somatic marker* hypothesis proposes that emotions and bodily states guide choices before conscious reasoning takes over. Recent syntheses in management and organizational research highlight how these neuroscientific findings link intuition to distributed neural networks and to the regulation of attention and emotion (Sadler-Smith, 2023). In education and organizational studies, intuition has been studied as a form of professional judgment. In ill-structured environments, professionals must make rapid, context-sensitive decisions that cannot be reduced to checklists or data (Hogarth, 2010). Teachers, for example, often prioritize intuitive expertise over formal metrics when deciding on student progression (Vanlommel, 2018).

### *3.2. The Measurement Debate*

Attempts to study intuition systematically have produced two main approaches. The first uses psychometric scales, such as the Rational–Experiential Inventory developed by Epstein, Pacini, Denes-Raj, and Heier (1996), which includes the Faith in Intuition subscale. Later work has refined these measures and distinguished different types of intuitive style (Pretz, 2011). These instruments measure how much people report relying on intuition versus analysis, and they are widely applied in management and education research. Their limitation is that they capture self-perceptions rather than the actual processes of intuition. The second approach examines physiological and neural markers. Functional neuroimaging studies reveal distinct activation patterns during intuitive judgments, often involving prefrontal and parietal areas (Volz & Von Cramon, 2006). Research on heart rate variability and skin conductance links bodily responses to intuitive awareness (Craig, 2002). While promising, these methods are resource-intensive and typically constrained to laboratory settings.

More recently, researchers have turned to human–AI interaction to observe intuition in practice. Experimental studies show that people's willingness to rely on AI recommendations depends strongly on whether these align with their intuitive judgments (Chen et al., 2023). In management, reviews also emphasize that intuition and AI analysis are most effective when used together rather than in isolation (Abbasi et al., 2022).

Taken together, these perspectives underline that intuition is real and measurable, though complex and context-dependent. Psychometric scales capture people's declared reliance, physiological markers trace its embodied roots, and decision studies reveal how it operates in practice. No single method can exhaust the phenomenon. What matters most may be recognizing intuition as a living competence that shapes judgment in ways not fully reducible to metrics.

### *3.3. Benefits and Functions*

Despite ongoing debates about its definition, there is broad agreement that intuition serves several core human functions. First, it is indispensable in decision-making under uncertainty, especially in high-pressure environments where analytical reasoning is too slow or information is incomplete. Gary Klein's research on the Recognition-Primed Decision (RPD) model demonstrated that experts such as firefighters, pilots, and military officers often act effectively by recognizing patterns drawn from experience rather than by comparing all possible options (Klein, 1999). Second, intuition is closely linked to creativity and innovation. Creative insights often appear before they can be fully articulated through logical reasoning. Research shows that intuitive, associative processes help generate new ideas, while analytic processes are needed to evaluate and refine them. Together, they form the dual engine of creative work (Gonçalves & Cash, 2021). Creative intuition can be understood as a pre-reflective, experience-based process that guides idea generation before conscious reasoning engages (Hardman, 2021). It is not a mystical gift but part of the ordinary workings of human cognition, shaped by experience and situational cues. Brain imaging evidence adds further depth to this picture. A large meta-analysis of fMRI studies shows that divergent thinking, linked to producing many possible ideas and the insight linked to the sudden "Aha!" of a solution, engages different brain networks. Divergent thinking draws on associative regions that support free exploration, while insight recruits networks involved in focus, conflict monitoring, and restructuring. These two systems complement one another, showing that creative intuition is not a single shortcut but a set of interconnected processes through which the brain generates and reshapes new ideas (Kuang et al., 2022). In this sense, intuition is not the opposite of analysis but its partner. Intuition opens possibilities and finds hidden connections, while analysis tests and grounds them. For professionals, cultivating this dynamic is essential: it enables the kind of originality and adaptability that machines can assist but not replace.

Third, intuition also underpins ethical judgment and interpersonal sensitivity. Moral psychology research shows that many ethical decisions are shaped by immediate, intuitive responses such as empathy or a sense of fairness, which guide people before deliberate reasoning takes over (Greene, 2013; Haidt, 2013). These moral intuitions form the basis of interpersonal sensitivity, allowing professionals in fields such as counseling, teaching, or leadership to respond to others' emotions and needs with empathy and integrity.

### *3.4. Intuition as a Competence in Skill Development*

Although often left implicit, many professional training programs already cultivate intuition. Case-based learning, simulations, and mentoring immerse learners in complex scenarios where no single correct answer exists, allowing them to develop tacit pattern recognition through practice. Over time, repeated exposure, feedback, and

reflection make intuitive judgments more reliable. Research on naturalistic decision-making confirms that expertise depends on this cycle: Klein's (1999) Recognition-Primed Decision model shows how professionals refine intuition in environments where patterns recur and outcomes are visible. Similar findings are reported in fields such as healthcare, aviation, and emergency response, where training explicitly targets rapid, context-sensitive judgment (Flin, O'Connor, & Crichton, 2008; Klein, 2009).

Recent studies provide evidence that skills development programs can foster intuitive competence. In nursing education, qualitative research shows that high-fidelity simulations help students improve their clinical judgment by learning to detect critical cues, recognize biases, and apply theoretical knowledge in realistic scenarios (Abdulmohdi & McVicar, 2024). A scoping review across higher education reports that approaches to intuition differ by discipline: in STEM, experiential and visual learning strategies are often used to strengthen expert intuition, whereas in the humanities, reflective dialogue and emotionally rich learning environments are associated with creative intuition (Cera & Sinclair, 2024). In management research, it has been argued that reflective practice and coaching support professionals in linking tacit experience with analytical reasoning, thereby making intuitive judgment more reliable and transparent (Sadler-Smith, 2023).

Beyond these formal programs, practice-based initiatives are emerging that explicitly focus on intuition as a dimension of professional development. The European Network of Intuitive Trainers (ENIT) brings together practitioners and researchers who explore how educators and trainers can consciously develop and apply intuition in learning contexts. Its outputs include the Open Book of Intuition (Afrikanov, 2024), which offers reflective methods for strengthening intuitive competence, as well as a curated online library of tools and resources (European Network of Intuitive Trainers, 2024).

## 4. Intuition in the Era of Artificial Intelligence

The rapid growth of artificial intelligence (AI) raises important questions about the distinct capacities of human cognition. AI systems excel in analytical reasoning, pattern recognition, and large-scale prediction, but they lack the embodied, emotional, and value-based dimensions of human judgment (Brynjolfsson & McAfee, 2017). This difference highlights the continuing importance of human abilities that complement machine intelligence rather than replicate it.

International organizations have articulated this shift with increasing clarity. UNESCO (2021), OECD (2019), and OECD (2023) stress adaptability, creativity, and ethical reasoning as essential competencies for the future. More recent documents link these principles directly to AI. UNESCO (2023) warns against overreliance on algorithms and emphasizes the strengthening of human judgment and agency. UNESCO (2024) identifies fifteen competencies from ethical awareness to pedagogical adaptation that educators need in AI-rich contexts. The OECD's *Digital Education Outlook 2023* complements this with system-level guidance on governance models and "guardrails" for generative AI. Although these policy documents rarely use the word *intuition*, they consistently highlight anticipation, discernment, and adaptability under uncertainty - qualities that correspond closely to intuitive judgment (Dane & Pratt, 2007; Hogarth, 2010). Research also confirms that as AI automates more analytical tasks, intuition and empathy become central human differentiators (Huang & Rust, 2018).

### *4.1. Artificial Intuition and Machine Learning*

In recent years, researchers have attempted to simulate aspects of intuitive judgment within AI systems. Piloto et al. (2022) trained a deep-learning model, inspired by infant cognition, to learn basic "intuitive physics," including object permanence, solidity, and continuity. Similarly, Davies et al. (2021) demonstrated how machine learning can assist mathematical discovery by identifying promising conjectures in knot theory and representation theory. These examples illustrate that AI can approximate narrow forms of intuition, particularly when intuition is defined in terms of rapid pattern recognition or hypothesis generation.

Other researchers have pushed the concept further by operationalizing "artificial intuition." Trovati, Teli, Polatidis, Cullen, and Bolton (2023), for example, introduced a decision-making framework that embeds heuristic, context-driven reasoning into AI systems, demonstrating that such models can, in some cases, perform comparably to human experts. Yet, as Pedwell (2024) argues, these attempts remain limited because they lack the embodied, affective, and ethical dimensions that characterize human intuition. In practice, what AI replicates is a narrow computational analogue, while the full spectrum of human intuitive judgment continues to be shaped by values, emotions, and embodied experience.

### *4.2. Human Intuition in Human - AI Interaction*

The more fruitful relationship may lie not in AI replicating intuition, but in the synergy between human intuition and machine analysis. Studies in decision science and human–computer interaction show that combining the two produces better results than either alone. Chen et al. (2023) demonstrated that people's willingness to rely on AI recommendations depends strongly on whether these recommendations align with their intuitive judgments. In management, Abbasi et al. (2022) argue in their review that intuition enables leaders to act quickly under uncertainty, while AI provides large-scale analysis to support or challenge those intuitive calls. Dellermann et al. (2019) argue that in complex systems, intuition and AI must work together: rational analysis and intuition alone are not sufficient.

Education provides a clear illustration. Teachers and school leaders often work in "wicked environments" (Hogarth, 2010) where problems are ill-defined and feedback is delayed. Here, intuition allows them to respond with sensitivity to context, while AI can supply data to refine or challenge their perceptions. Intuition ensures ethical discernment and situational awareness, while AI extends the breadth and speed of analysis. The value lies in their complementarity.

## 5. Discussion

The literature reviewed across psychology, neuroscience, and education reveals broad agreement that intuition is an embodied, experience-based mode of knowing that supports decision-making, creativity, and ethical judgment.

Yet the meaning and value of this capacity vary considerably between disciplines. Earlier reviews of intuition have tended to concentrate on management and decision science. Abbasi et al. (2022) summarized over one hundred empirical studies and concluded that intuition and rationality operate most effectively in combination. Their focus, however, remained on organizational settings and managerial performance. The present review advances this argument by demonstrating that a similar complementarity holds in educational environments, where professionals must act under uncertainty and ethical complexity rather than purely economic pressure. Teachers, school leaders, and trainers make judgments in "wicked" conditions (Hogarth, 2010) where data are incomplete and consequences are delayed. For such contexts, the ability to integrate intuitive discernment with analytical reflection becomes a core professional competence, not an incidental trait.

In the field of creativity research, Kuang et al. (2022) offered a meta-analysis of fMRI studies distinguishing between divergent thinking and insight. Their work provides neural evidence that creative intuition is not a single shortcut but a set of interacting processes engaging both associative and control networks. Building on this, the current review interprets intuition as the cognitive bridge between exploration and evaluation, which generates possibilities that analytical reasoning then tests. For educators, this means that creative learning is not a clash between imagination and logic, but a process that moves between intuitive exploration and analytical refinement, which can be strengthened through design-thinking, reflection, and feedback.

A third benchmark for comparison is Cera and Sinclair's (2024) scoping review of intuition in higher education. They identified significant disciplinary variation: experiential and visual learning support intuitive competence in STEM fields, while reflective and affective engagement do so in the humanities. The present review complements and extends their findings by introducing a new dimension, such as the influence of artificial intelligence, and by arguing that AI-mediated contexts heighten rather than diminish the need for intuitive judgment. When algorithmic systems offer rapid analysis or prediction, the human role shifts toward discerning which outputs are meaningful, ethical, or contextually appropriate.

Comparative interpretation across these reviews suggests three overarching insights. First, intuition consistently emerges as trainable rather than innate. The mechanisms identified by Klein (1999) and Hogarth (2010), such as repetition, feedback, and reflection, appear across domains, from clinical judgment to teacher decision-making. The implication for education is that intuition should be made explicit as a learning outcome, supported by structured practice rather than assumed to develop incidentally. Second, intuition improves through calibration, as experience and feedback help align intuitive feelings with real-world results. This insight aligns with evidence from simulation-based learning in healthcare (Abdulmohdi & McVicar, 2024; Diaz-Navarro et al., 2024) and from coaching models that integrate reflective dialogue (Sadler-Smith, 2023). Third, in the context of AI, the relationship between intuition and computation is best understood as hybrid intelligence (Dellermann et al., 2019). Human–computer interaction studies (Chen et al., 2023) show that intuitive coherence shapes user trust in algorithmic recommendations. This finding challenges the assumption that AI will replace human judgment. Instead, it suggests a division of labor in which algorithms extend analytical reach while intuition ensures contextual and ethical alignment. While previous reviews have established intuition's presence in specific domains, few have synthesized its cognitive, affective, and ethical dimensions into an educational framework. By foregrounding the synergy between intuitive and algorithmic reasoning, the current study offers a conceptual bridge between classical theories of tacit knowledge (Polanyi, 1966) and contemporary debates on digital literacy and professional ethics.

Finally, the discussion underscores a policy implication. International frameworks such as those of UNESCO (2021), UNESCO (2023), UNESCO (2024), OECD (2019), and OECD (2023) identify adaptability, discernment, and ethical responsibility as key future competences, yet they rarely use the term intuition. The current review suggests that these qualities are, in fact, intuitive capacities expressed in professional form. Recognizing and cultivating them explicitly within teacher education, leadership training, and lifelong learning would close a conceptual gap between emerging AI policies and the lived practice of judgment. In this way, intuition is reframed not as a soft or mysterious faculty but as a disciplined, future-oriented competence central to sustaining human meaning and responsibility in an age of intelligent machines.

## 6. Conclusion

This article positions intuition as a distinct, evidence-based dimension of human cognition that underpins creativity, ethical judgment, and professional decision-making. Rather than competing with analytical reasoning, intuition complements it by transforming experience, emotion, and contextual cues into rapid and meaningful understanding. In AI-driven environments, this competence becomes even more critical. While algorithms process information at an unprecedented scale, they lack the embodied and value-laden discernment that guides human choice. The ability to connect analytical data with intuitive insight therefore represents a central component of professional expertise.

The findings suggest that education and training should treat intuition not as an implicit outcome of experience but as a learnable skill. Deliberate practice, feedback, and reflection can refine intuitive judgment and guard against bias. When combined with digital and analytical literacies, these methods create balanced, reflective professionals able to collaborate effectively with intelligent systems.

Recognizing intuition as a future-oriented competence encourages a broader reflection on what it means to be educated in the age of AI. Sustaining human agency and ethical responsibility will depend not only on mastering technological tools but also on strengthening the inner capacity to sense, discern, and act wisely within complex and uncertain environments.

## References

Abbasi, S., Bilal, M., & Rasheed, A. (2022). Intuition and rationality in managerial decision-making: A review and future directions. *Management Decision, 60*(9), 2321–2339.

Abdulmohdi, N., & McVicar, A. (2024). Student nurses' perceptions of the role of high-fidelity simulation in developing decision-making skills for clinical practice: A qualitative study. *Sage Open Nursing, 10*, 23779608241255299. https://doi.org/10.1177/23779608241255299

Afrikanov, D. (2024). *Intuitive decision-making in the age of artificial intelligence.* Germany: Springer.
Baumeister, R. F., & Leary, M. R. (1997). Writing narrative literature reviews. *Review of General Psychology, 1*(3), 311–320. https://doi.org/10.1037/1089-2680.1.3.311
Brynjolfsson, E., & McAfee, A. (2017). *Machine, platform, crowd: Harnessing our digital future.* United States: W. W. Norton.
Cera, R., & Sinclair, M. (2024). What kind of intuition for what kind of education: A scoping review. *Encyclopaideia: Journal of Phenomenology and Education, 28*(70), 53-70. https://doi.org/10.6092/issn.1825-8670/19650
Chen, V., Liao, Q. V., Wortman Vaughan, J., & Bansal, G. (2023). Understanding the role of human intuition on reliance in human-AI decision-making with explanations. *Proceedings of the ACM on Human-Computer Interaction, 7*(CSCW2), 1-32. https://doi.org/10.1145/3610219
Craig, A. D. (2002). How do you feel? Interoception: The sense of the physiological condition of the body. *Nature Reviews Neuroscience, 3*(8), 655-666. https://doi.org/10.1038/nrn894
Damasio, A. (1994). *Descartes' error: Emotion, reason, and the human brain.* United States: Putnam.
Dane, E., & Pratt, M. G. (2007). Exploring intuition and its role in managerial decision making. *Academy of Management Review, 32*(1), 33-54. https://doi.org/10.5465/amr.2007.23463682
Davies, A., Veličković, P., Buesing, L., Blackwell, S., Zheng, D., Tomašev, N., … Kohli, P. (2021). Advancing mathematics by guiding human intuition with AI. *Nature, 600*(7887), 70-74. https://doi.org/10.1038/s41586-021-04086-x
Dellermann, D., Ebel, P., Söllner, M., & Leimeister, J. M. (2019). Hybrid intelligence. *Business & Information Systems Engineering, 61*(5), 637-643. https://doi.org/10.1007/s12599-019-00595-2
Diaz-Navarro, C., Armstrong, R., Charnetski, M., Freeman, K., Koh, S., Reedy, G., … Issenberg, B. (2024). Global consensus statement on simulation-based practice in healthcare. *Clinical Simulation in Nursing, 93*, 101552. https://doi.org/10.1016/j.ecns.2024.101552
Epstein, S., Pacini, R., Denes-Raj, V., & Heier, H. (1996). Individual differences in intuitive–experiential and analytical–rational thinking styles. *Journal of Personality and Social Psychology, 71*(2), 390-405. https://doi.org/10.1037/0022-3514.71.2.390
European Network of Intuitive Trainers. (2024). *Developing intuitive intelligence: Training approaches and best practices.* Belgium: European Network of Intuitive Trainers.
Flin, R., O'Connor, P., & Crichton, M. (2008). *Safety at the sharp end: A guide to non-technical skills.* United Kingdom: Ashgate.
Gonçalves, M., & Cash, P. (2021). The life cycle of creative ideas: Towards a dual-process theory of ideation. *Design Studies, 72*, 100988. https://doi.org/10.1016/j.destud.2020.100988
Greene, J. (2013). *Moral tribes: Emotion, reason, and the gap between us and them.* United Kingdom: Penguin.
Haidt, J. (2013). *The righteous mind: Why good people are divided by politics and religion.* United Kingdom: Vintage.
Hardman, T. J. (2021). Understanding creative intuition. *Journal of Creativity, 31*, 100006. https://doi.org/10.1016/j.yjoc.2021.100006
Hogarth, R. M. (2010). *Educating intuition.* United States: University of Chicago Press.
Huang, M.-H., & Rust, R. T. (2018). Artificial intelligence in service. *Journal of Service Research, 21*(2), 155-172. https://doi.org/10.1177/1094670517752459
Jung, C. G. (1921). *Psychological types. In collected works* (Vol. 6). Princeton, NJ: Princeton University Press.
Kahneman, D. (2011). *Thinking, fast and slow.* United States: Farrar, Straus and Giroux.
Klein, G. (1999). *Sources of power: How people make decisions.* United States: MIT Press.
Klein, G. (2009). *Streetlights and shadows: Searching for the keys to adaptive decision making.* United States: MIT Press.
Kuang, C., Chen, J., Chen, J., Shi, Y., Huang, H., Jiao, B., … Lin, J. (2022). Uncovering neural distinctions and commodities between two creativity subsets: A meta-analysis of fMRI studies in divergent thinking and insight using activation likelihood estimation. *Human Brain Mapping, 43*(16), 4864-4885. https://doi.org/10.1002/hbm.26029
OECD. (2019). *OECD learning compass 2030: A series of concept notes.* France: OECD Publishing.
OECD. (2023). *Digital education outlook 2023: Paving the way for digital education.* France: OECD Publishing.
Pedwell, C. (2024). The intuitive and the counter-intuitive: AI and the affective ideologies of common sense. *New Formations*, (112), 70-93. https://doi.org/10.3898/NewF:112.04.2024
Piloto, L. S., Weinstein, A., Battaglia, P., & Botvinick, M. (2022). Intuitive physics learning in a deep-learning model inspired by developmental psychology. *Nature Human Behaviour, 6*(9), 1257-1267. https://doi.org/10.1038/s41562-022-01394-8
Polanyi, M. (1966). *The tacit dimension.* United States: University of Chicago Press.
Pretz, J. E. (2011). Types of intuition: Inferential and holistic. In M. Sinclair (Ed.), Handbook of intuition research. In (pp. 23–35). Edward Elgar Publishing: United Kingdom
Sadler-Smith, E. (2023). *Intuition in business.* United Kingdom: Oxford University Press.
Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research, 104*, 333-339. https://doi.org/10.1016/j.jbusres.2019.07.039
Trovati, M., Teli, K., Polatidis, N., Cullen, U. A., & Bolton, S. (2023). Artificial intuition for automated decision-making. *Applied Artificial Intelligence, 37*(1), 2230749. https://doi.org/10.1080/08839514.2023.2230749
UNESCO. (2021). *Reimagining our futures together: A new social contract for education.* France: UNESCO Publishing.
UNESCO. (2023). *Guidance for generative AI in education and research.* France: UNESCO Publishing.
UNESCO. (2024). *AI competency framework for teachers.* France: UNESCO Publishing.
Vanlommel, K. (2018). Teachers' data use for decision making: From data to classroom practice. *Studies in Educational Evaluation, 56*, 46–52.
Volz, K. G., & Von Cramon, D. Y. (2006). What neuroscience can tell about intuitive processes in the context of perceptual discovery. *Journal of Cognitive Neuroscience, 18*(12), 2077-2087. https://doi.org/10.1162/jocn.2006.18.12.2077