ISSN: 2993-8759
Iris Journal of Educational Research
DOI: 10.33552/IJER.2026.06.000629
Iris Publishers

Opinion Article

Epistemic Justice in Data Analytics during the American AI Renaissance

Alif Laila Tisha (Tish)*

Assistant Professor of Business, North Seattle College, Curriculum Developer and Board Member, Business Intelligence for Global Entrepreneurship, University of Washington

***Corresponding author**: Alif Laila Tisha (Tish), Assistant Professor of Business, North Seattle College, Curriculum Developer and Board Member, Business Intelligence for Global Entrepreneurship, University of Washington

Received Date: January 27, 2026

Published Date: February 18, 2026

Abstract

Contemporary data analytics education increasingly recognizes creativity not as an ancillary skill but as a core epistemic practice. In this paper, the "American AI Renaissance" refers to the current period of rapid expansion in artificial intelligence (AI) development and adoption in the United States, characterized by the integration of AI systems into everyday decision-making, education, and knowledge production, alongside growing ethical and epistemic tensions about what counts as valid understanding. Data analysis is not a purely mechanical exercise; rather, it requires interpretive judgment, problem framing, and iterative sense-making- processes that align closely with established models of creative problem solving (Donoghue et al.). Within this framework, creativity is best understood not as a static trait but as a dynamic process that unfolds under conditions of uncertainty, constraint, and flux (Amabile and Pratt).

Periods of social and technological instability- often accompanied by heightened anxiety- do not uniformly suppress creativity. Empirical research instead suggests that uncertainty and affective arousal can, under certain conditions, catalyse creative cognition by disrupting habitual patterns of thought and increasing exploratory behaviour (Baas et al.; Markman et al.). While excessive stress may impair creative performance, moderate levels of uncertainty have been shown to activate adaptive sense-making processes that generate novel insights (Byron, Khazanchi, and Nazarian).

Within highly digitized educational environments, however, the measurement infrastructures used to assess learning and analytic competence remain limited. Many constructs central to creative and ethical data analysis- such as meaning-making, interpretive judgment, and relational engagement- are not directly observable and are frequently inferred through behavioural proxies that only partially capture underlying cognitive and affective processes (Wilson et al.; Motz et al.). As a result, learning analytics systems risk privileging what is easily quantifiable over what is epistemically significant.

This challenge is compounded by the affective nature of human decision-making. A substantial body of research demonstrates that individuals rely heavily on affective heuristics when evaluating information, risk, and relevance, shaping both what data are collected and how those data are interpreted (Finucane et al.). Although emotions are central to judgment and learning, there is no single, gold-standard method for measuring affect. Existing approaches- including self-report, physiological indicators, and behavioural inference- often show limited convergence and capture different components of emotional experience (Mauss and Robinson).

Further, we may be approaching a broader cultural and ethical reorientation toward questions of alignment, meaning, and stakeholder impact. Recent peer-reviewed research indicates that consumer spending on wellness, spiritual, and spiritually adjacent products and services has expanded substantially in the early 2020s compared with the late 2010s, reflecting a broader shift toward holistic, meaning-oriented conceptions of health and well-being (Sheth; Dillette et al.). Industry-based economic analyses further suggest that this expansion represents a historically significant increase in U.S. wellness-related expenditures since 2019. Similarly, global spiritual and wellness products markets have reached multi-trillion-dollar valuations and are forecasted to grow through the remainder of the decade (Putrevu and Mertzanis). These economic trends align with a theoretical shift in contemporary consumer priorities toward holistic well-being, meaning, and what might be termed spirituality-aligned capitalism- a context that informs the epistemic and pedagogical concerns of this paper.

Rather than framing this as an established empirical fact, this paper treats it as a normative and anticipatory claim: that in the context of accelerating AI adoption, educational priorities may increasingly shift toward teaching how to make decisions that are aligned across diverse stakeholders- economically, socially, and ethically. This orientation draws on stakeholder theory and ethics-of-care traditions rather than predictive certainty.

For operational effectiveness, products- particularly digital products- are intentionally designed to be intuitive, leveraging cognitive psychology and human-centered design principles to reduce friction and guide user behaviour (Norman). In parallel, digital consumption data indicate 4.3 billion users globally engaged in digital environments, including smartphones, computers, and streaming media (Xu). With the rapid adoption of AI in content creation and personalization, unprecedented volumes of data are being amassed and operationalized to shape decision-making in increasingly digitized lifestyles.

Design thinking frameworks emphasize empathy, problem definition, ideation, prototyping, testing, and feedback loops (Brown). In current data analytics pedagogy, however, analytic workflows often begin at the "problem definition" stage, bypassing empathy as a measurable input. Because emotional experience is difficult to quantify with precision, affective data are frequently excluded from early analytic stages- rendering the full design thinking cycle only partially operationalized in data-driven contexts.

Further, large language models are primarily optimized using linear algebraic representations and statistical correlations over high-dimensional data. While these models capture complex relational patterns, they do not directly model causal emotional experience. Human decision-making, by contrast, reflects deeply interdependent cognitive and affective processes, suggesting a growing epistemic gap between how decisions are made by humans and how they are represented in computational systems.

The frontal lobe, associated with executive function and impulse regulation, is among the last brain regions to fully mature, often not reaching full development until the mid-twenties (Casey, Tottenham, and Fossella). During a period of rapid technological change, individuals under 25 spend substantial portions of their waking hours in digital environments, and a meaningful subset of those contributing to AI development and deployment are still developing the neural capacities associated with long-term planning and abstract risk assessment.

A growing body of research links high levels of screen exposure in adolescents and young adults with increased risk of depression and sedentary health outcomes, including obesity, although these relationships are best understood as correlational rather than strictly causal (Stiglic, Neza, and Russell). These patterns raise concerns about the alignment between current digital environments and adolescent well-being, and they underscore the urgency of pedagogical frameworks that help learners recognize, articulate, and interpret emotional inputs rather than assuming purely rational decision-making.

With large-scale AI systems, unexamined assumptions can quickly harden into operational "facts" through repetition, optimization, and deployment at scale (Horvat, Marjan, et al.). Qualitative models often privilege surface linguistic frequency as a proxy for importance, while quantitative models- being cheaper and easier to deploy- are disproportionately adopted by organizations with limited analytic resources. These dynamics raise concerns not only about harm reduction but also about representational equity.

Given these limitations, this paper argues for an alternative pedagogical approach that temporarily suspends premature quantification in favor of structured affective reflection. Drawing on emotion-labeling research and theories of affective granularity, students can be introduced to analytic reasoning through tools such as the feelings wheel, which support the articulation and differentiation of emotional experience (Barrett; Lieberman et al.). These affective insights can then be systematically reconnected to measurable data points, enabling students to triangulate between subjective experience and quantitative evidence. Such an approach advances epistemic justice by legitimizing forms of knowing often excluded from data-centric curricula while strengthening, rather than weakening, analytic rigor [1-18].

So, now, dear students- how do we capture emotion?

Acknowledgment

None.

Conflict of Interest

No conflict of interest.

References

1. Amabile Teresa M, Michael G Pratt (2016) The Dynamic Componential Model of Creativity and Innovation in Organizations. Research in Organizational Behaviour 36: 157–183.
2. Barrett Lisa Feldman (2004) Feelings or Words? Understanding the Content in Self-Report Ratings of Experienced Emotion. Journal of Personality and Social Psychology 87(2): 266–281.
3. Brown Tim (2009) Change by Design. Harper Business.
4. Byron, Kristin, Shalini Khazanchi, David Nazarian (2010) The Relationship Between Stressors and Creativity: A Meta-Analysis Examining Competing Theoretical Models. Journal of Applied Psychology 95(1): 201–212.
5. Casey BJ, Nim Tottenham, John A. Fossella (2002) Clinical, Imaging, Lesion, and Genetic Approaches toward a Model of Cognitive Control. Developmental Psychobiology: The Journal of the International Society for Developmental Psychobiology 40(3): 237–254.
6. Dillette Alana K, Alecia C Douglas, Carey Andrzejewski (2021) Dimensions of holistic wellness as a result of international wellness tourism experiences. Current Issues in Tourism 24(6): 794-810.
7. Donoghue Tom, et al. (2021) Teaching Creative and Practical Data Science at Scale. Journal of Statistics and Data Science Education 29(3): 290–303.
8. Finucane Melissa L, et al. (2000) The Affect Heuristic in Judgments of Risks and Benefits. Journal of Behavioural Decision Making 13(1): 1–17.
9. Horvat Marjan, et al. (2025) Communicative memory. Institute IRRIS for Research, Development and Strategies of Society, Culture, and Environment.
10. Lieberman Matthew D, et al. (2007) Putting Feelings into Words: Affect Labeling Disrupts Amygdala Activity in Response to Affective Stimuli. Psychological Science 18(5): 421–428.
11. Mauss Iris B, Michael D Robinson (2009) Measures of Emotion: A Review. Cognition and Emotion 23(2): 209–237.
12. Markman Keith D, et al. (2014) A (Creative) Portrait of the Uncertain Individual." Personality and Social Psychology Bulletin 40(3): 370–382.
13. Motz Benjamin A, et al. (2023) A LAK of Direction: Misalignment Between the Goals of Learning Analytics and Its Research Scholarship. Journal of Learning Analytics 10(1): 1–19.
14. Norman Don (2013) The Design of Everyday Things. Basic Books.
15. Putrevu Jayaprada, Charilaos Mertzanis (2025) Wellness Sector Transformation: A Systematic Review of Trends, Challenges, and Future Research Directions. Journal of Economic Surveys.
16. Sheth Jagdish (2020) Impact of Covid-19 on consumer behaviour: Will the old habits return or die?." Journal of business research 117: 280-283.
17. Wilson Anna et al. (2017) Learning Analytics: Challenges and Limitations." Teaching in Higher Education, vol. 22, no. 8: 991–1007.
18. Xu Lingran et al. (2025) A systematic review of digital literacy in lifelong learning for older adults: challenges, strategies, and learning outcomes. Educational technology research and development pp. 1-48.