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Observability over Trialability: AI Metadata Attributes and Adoption Categories in Canva Usage Among Undergraduate Students in Surabaya

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Abstract

This study findings on the relationship between AI metadata attributes and adopter categories among undergraduate Canva users in Surabaya, Indonesia. Referring to Rogers's Diffusion of Innovation theory (2003), five innovation attributes are used as a human-centered structured metadata scheme to evaluate AI innovation. A quantitative survey of 280 students measured using a Likert scale. Students were classified into three adopter categories: early adopters, majority, and late adopters. The findings reveal a striking asymmetry: Trialability attribute does not have a significant relationship with the adopter categories, whereas Observability shows a strong and significant relationship. Although Canva provides easily testable AI features, students adopt them more after seeing the success of their peers. This underscores the importance of social systems as mechanisms for AI diffusion. This study contributes to the DCMI 2026 theme "Meaning-Driven AI" thru the concept of "social adoption metadata" which are observational signals from peers that shape AI adoption decisions. AI systems aligned with human values need model social context as a structured metadata, not just technical capabilities. Implication for human-centered metadata design in AI-integrated learning are discussed.

1. Introduction

The integration of Artificial Intelligence (AI) in educational environment experiences various pros and cons [1]. Canva has become a graphic design platform that provides AI-based features to fulfill academic tasks [2], [3]. Positively, AI Canva is considered to facilitate students in improving the quality and efficiency of academic tasks [4]. Although these features are available and easily accessible, initial observations indicate that undergraduate students in Surabaya, Indonesia, have not yet fully adopted them actively in completing academic tasks. The gap between availability and adoption drives the study of AI metadata attributes as characteristics that influence user decisions in adopting technology.

2. Theoretical Framework: Rogers' Innovation Attributes as AI Metadata

Rogers [5] explains that innovation adoption is shaped by five attributes. In this study, these attributes are conceptualized as human-centered metadata because they provide contextual information through which users interpret, evaluate, and decide whether to adopt an AI-enabled system beyond its technical specifications. The five attributes include: (1) Relative Advantage: perception that AI Canva is better than previous manual design methods; (2) Compatibility: Alignment with students' academic needs and workflows; (3) Complexity: Difficulty in understanding and using AI Canva fea-

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tures; (4) Trialability: Ability to test AI features before full adoption; (5) Observability: visibility to peers' successful AI Canva use within social networks. Adopter categories followed Rogers' typology: Early Adopters, Majority, and Late Adopters classified based on the timing and consistency of AI feature uptake in Canva.

3. Methodology

A quantitative cross-sectional survey was conducted among 280 undergraduate students at public universities in Surabaya, Indonesia using purposive sampling. Participants were required to (1) be active undergraduate students and (2) have used AI Canva features for academic assignments. Rogers' five innovation attributes were measured using validated 5-point Likert-scale instruments with good reliability (Cronbach's $\alpha = 0.856$). Relationships between innovation attributes and adopter categories were examined using Chi-Square and Spearman correlation test ($p < 0.05$).

4. Findings

The study revealed a key asymmetry between two innovation attributes: **Trialability** showed no significant relationship (p-value = 0,455) with adopter categories, indicates that easy access to AI features did not drive adoption. In contrast, **Observability** showed a strong and significant relationship (p-value = 0,000), making it the strongest predictor of adoption. Students relied more on socially generated metadata (visible peer success) than on platform-generated signals such as tutorials or trial access [6]. This highlights the role of social systems as an informal metadata layer influencing AI adoption [7]. Early adopters showed stronger intrinsic motivation, while majority and late adopters tended to wait for observable peer validation before adopting AI Canva.

5. Discussion: Social System as Emergent Metadata

The dominance of observability suggests that students' trust in AI features is shaped more by social context than by platform-generated metadata. This finding highlights the importance of relational and emergent metadata produced through peer observation and collective behavior [8]. Based on these finding, we propose the concept of "social adoption metadata" defined as peer-generated contextual information that user observe and interpret when evaluating whether an AI innovation is worth adopting. Unlike social influence, which emphasizes persuasion, social adoption metadata focuses on observable informational signals derived from peers' successful use of a technology.

6. Contribution to DCMI 2026 and Implications

This study contributes to DCMI 2026 by: (1) reconceptualizing Rogers' innovation attributes as human-centered metadata dimensions; (2) showing that social systems influence student AI adoption more than technical capabilities; and (3) highlighting social observability as structured metadata in AI systems. The findings suggest that platform such as Canva can support more equitable and meaningful AI adoption through visible peer-use signals.

References

[1] A. I. Pisica and R. M. Zaharia, *Implementing AI in Higher Education - Qualitative Inquiry on International Students' Perspectives*. in BASIQ 2024. 2024, pp. 388–394.

[2] H. Vartiainen and M. Tedre, "Using artificial intelligence in craft education: crafting with text-to-image generative models," *Digital Creativity*, vol. 34, no. 1, pp. 1–21, 2023, doi: 10.1080/14626268.2023.2174557.

[3] N. F. Jamaludin and S. F. Sedek, "Canva as a Digital Tool for Effective Student Learning Experience," *Journal of Advanced Research in Computing and Applications*, vol. 33, no. 1, pp. 22–33, 2024, doi: 10.37934/arca.33.1.2233.

[4] R. A. Syahputri and J. Nugraha, "Student Behavior in Using Artificial Intelligence for Canva Instant Presentation," *Journal of Office Administration: Education and Practice*, vol. 4, no. 2, pp. 119–134, 2024, doi: 10.26740/joaep.v4n2.p119-134.

[5] E. M. Rogers, *Diffusion of Innovations*, 5th ed. Free Press, 2003.

[6] L. J. Menzli, L. K. Smirani, J. A. Boulahia, and M. Hadjouni, "Investigation of open educational resources adoption in higher education using Rogers' diffusion of innovation theory," *Heliyon*, vol. 8, no. 7, 2022, doi: 10.1016/j.heliyon.2022.e09885.

[7] G. Spinelli, L. Gastaldi, L. Van Hove, and E. Van Droogenbroeck, "Can cluster analysis enrich the innovation resistance theory? The case of mobile payment usage in Italy," *Technology in Society*, vol. 79, 2024, doi: 10.1016/j.techsoc.2024.102729.

[8] M. H. Shad, J. Hatami, and E. Azimi, "Evaluation of the Success of the "Ata Virtual Science Laboratory" Based on Everett Rogers' Innovation Diffusion Model," *International Journal of Learning Spaces Studies*, vol. 3, no. 2, pp. 66–79, 2025, doi: 10.22034/lss.2025.498598.1032.