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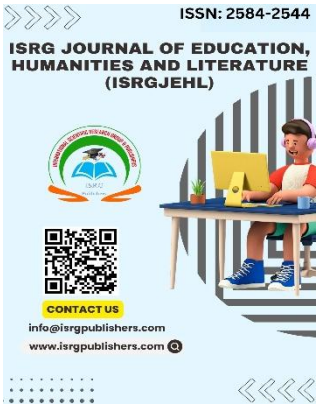

Personality traits and emerging digital technology adoption among art students in Chinese universities: A narrative review

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Abstract

Background: *Emerging digital technologies, including artificial intelligence (AI), virtual reality (VR), online learning platforms, and cloud computing, are transforming teaching and learning in higher education, yet adoption among students is uneven and shaped by relatively stable individual differences, particularly personality traits.* ***Aims:*** *This narrative review synthesises evidence on the Big Five personality traits (openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism) as predictors of emerging digital technology adoption intention in Chinese higher education, with a particular focus on art students in Shaanxi Province, and proposes a conceptual framework to guide future primary research.* ***Methodology:*** *Drawing on the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT2), and the Big Five personality framework, the review thematically synthesises 47 peer-reviewed studies published between 2010 and 2024, identified across six databases (Web of Science, Scopus, PsycINFO, ERIC, China National Knowledge Infrastructure, and Google Scholar) and supplemented by recent generative AI (GenAI) studies located through forward citation tracking. Personality effects are traced through perceived usefulness (PU), perceived ease of use (PEOU), and, for art student populations, hedonic motivation (HM), with resilience and adaptability integrated as personality-adjacent moderating constructs.* ***Results/Findings:*** *Openness and conscientiousness are the most robust positive predictors of adoption intention; neuroticism consistently inhibits adoption through multidimensional AI anxiety, including a creative displacement anxiety unique to art student populations; extraversion is context-dependent and may reverse for solo-use creative tools; and agreeableness operates through social influence rather than as an independent predictor. Recent empirical evidence confirms that these personality effects extend to the generative AI tools increasingly central to art education.* ***Conclusion:*** *The proposed conceptual framework, mapping four conditional indirect paths from the Big Five traits through PU, PEOU, and HM to adoption intention, with resilience and adaptability as supplementary moderators, constitutes the central theoretical contribution of this review. Recommendations are offered for university administrators, educators, and technology developers in Shaanxi and broader China.*

Keywords: *art students, Big Five personality, China, generative AI, higher education, technology acceptance.*

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1. Introduction

1.1 Overview

The rapid integration of emerging technologies — artificial intelligence (AI), virtual reality (VR), online learning platforms, and cloud computing — has become central to reshaping modern higher education. These tools are no longer supplementary; they are fundamental in transforming teaching, enhancing learning outcomes, and addressing challenges in contemporary classrooms (Akintayo, Adeleke, Okonkwo, & Ibrahim, 2024). AI supports personalised learning through data-driven adaptation to individual student needs, enabling tailored instruction, targeted support, and efficient administrative management (López & Kommers, 2022; Elias, 2023). VR provides immersive, interactive environments that promote active learning and deepen conceptual understanding (Huang et al., 2021; Freina & Ott, 2015). Online learning platforms broaden educational access through flexible synchronous and asynchronous modes, fostering collaboration through multimedia tools and forums (Graham, 2019; Indrawati & Kuncoro, 2021).

Against this backdrop, research indicates that technology acceptance is influenced not only by perceived usefulness and ease of use, but also by relatively stable individual differences — particularly personality traits. This pattern has become especially salient with the rise of generative AI (GenAI), where openness to experience, conscientiousness, and neuroticism have emerged as important predictors of students' educational use, attitudes, and behavioural intentions (Arpaci et al., 2025; Azeem & Abbas, 2025). Art and design students in Chinese universities represent a distinctive population whose engagement with digital tools is shaped by aesthetic orientation, creative identity, and studio-based learning cultures — factors that interact with personality in ways not captured by general higher education research.

The present narrative review synthesises peer-reviewed evidence on personality, technology acceptance, and adoption intention in higher education, with particular attention to findings relevant to art students in Shaanxi Province (陕西省) and Chinese university contexts. Using thematic synthesis (Thomas & Harden, 2008), the review organises the literature around Big Five personality dimensions, mediating acceptance mechanisms, and contextual moderators — including resilience and adaptability as personality-adjacent constructs of particular relevance in generative AI adoption contexts. The review further proposes a conceptual framework mapping the pathways through which personality influences technology adoption intention — a framework intended to guide future primary research rather than present tested statistical claims.

1.2 Background and Context

The adoption of new technologies is increasingly influenced by individual personality traits. Openness to experience is associated with greater willingness to explore and embrace new technologies; conscientious individuals approach technology methodically and invest sustained effort in proficiency development; extraverted individuals are inclined toward social and collaborative technology contexts; agreeable individuals are more responsive to peer and instructor recommendations; and neurotic individuals exhibit higher anxiety and resistance to new systems (FakhrHosseini et al., 2024; Granić, 2024; Shahadat et al., 2023). Beyond the Big Five, resilience — the ability to deal with challenges and recover from setbacks associated with technological adoption — and adaptability — the capacity to adjust behaviours in response to rapidly changing technological landscapes — function as personality-adjacent traits that further modulate technology acceptance (Serrat, 2017; Nencini et al., 2020). In the context of generative AI adoption, where art students face creative displacement anxiety alongside standard technology learning challenges, resilience and adaptability are particularly salient moderators.

In Shaanxi Province, the education environment is characterised by a diverse student population including urban and rural backgrounds, growing integration of vocational and applied university education, and an expanding cultural industries sector offering new pathways for creative graduates (Jiang, Chen & Lei, 2023; Zhang, 2019). Higher education institutions such as Shaanxi University and Xi'an University of Architecture and Technology are actively implementing digital transformation agendas under the provincial 14th Five-Year Plan (2021–2025, Shaanxi Provincial Government), which explicitly prioritises the digitisation of creative industries and expansion of digital arts programmes.

No primary studies were identified that focus exclusively on art students in Shaanxi Province — the most significant evidential gap acknowledged throughout this review. All contextual conclusions pertaining to Shaanxi are extrapolated from studies of art, design, or humanities students in geographically and disciplinarily adjacent contexts.

Figure 1: Shaanxi Province in the Context of China's Higher Education Geography

Note. Shaanxi Province (陕西省, capital Xi'an) is the study's target context. It should be distinguished from the neighbouring Shanxi Province (山西省, capital Taiyuan). Source: Adapted from https://chinafolio.com/provinces/

1.3 Research Questions

This narrative review is guided by 10 synthesis questions. RQ1–4 are evidence synthesis questions answerable through thematic analysis of the literature. RQ5 is a consolidated framework proposition question synthesising the proposed conditional indirect paths across all four UTAUT2 antecedents. RQ6–9 are analytical synthesis questions. RQ10 is the overarching framework question. Each synthesis question is framed so that it can be operationalised as a testable empirical hypothesis in the future primary study for which this review lays the theoretical groundwork.

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1. What does the existing evidence reveal about the theoretical and empirical relationship between personality traits and the performance expectancy → behavioural intention pathway?
2. What does the existing evidence reveal about personality as a moderator of the effort expectancy → behavioural intention relationship?
3. What does the existing evidence reveal about personality as a moderator of the social norms → behavioural intention relationship, particularly for agreeable individuals in Chinese art education?
4. What does the existing evidence reveal about personality as a moderator of the facilitating conditions → behavioural intention relationship?
5. What conditional indirect paths from Big Five personality traits through PU, PEOU, and hedonic motivation to adoption intention can be proposed for future empirical testing across the four UTAUT2 antecedents (PE, EE, SN, and FC)?
6. What mediating roles do PU, PEOU, and hedonic motivation play in the personality → adoption intention relationship, and how do these differ for art students versus general higher education populations?
7. What contextual variables moderate the personality–mediator pathways, and which are most relevant to art students in Shaanxi?
8. What does the conditional suppression effect — whereby high openness combined with strong creative identity may inhibit GenAI adoption — reveal about the non-linearity of personality effects in art education?
9. How do the identified personality–technology pathways differ across the four technology types (LMS, mobile, immersive, AI-assisted creative tools)?
10. What conceptual framework best represents the moderated mediation architecture for future primary research on personality and IT adoption among art students in Shaanxi?

1.4 Research Objectives

The general objective of this review is to synthesise peer-reviewed evidence on personality traits as predictors of IT adoption intention in higher education, and to propose a conceptual framework for future primary research specifically addressing art students in Shaanxi, China. The specific objectives are: (1) to conduct a thematic synthesis of the personality–technology acceptance literature across Big Five dimensions; (2) to examine the mediating roles of PU, PEOU, and hedonic motivation; (3) to identify the moderating effects of Big Five personality traits, resilience, and adaptability on these mediation relationships; and (4) to propose a theoretically grounded moderated mediation framework guiding future empirical work.

1.5 Significance of the Study

This study makes four key contributions. First, it extends the UTAUT2 and TAM literature by integrating Big Five personality traits as moderating factors and hedonic motivation as a third mediating pathway specific to art education contexts. Second, it integrates resilience and adaptability as personality-adjacent moderators in GenAI adoption contexts — constructs largely absent from prior technology acceptance reviews. Third, it provides evidence-based practical guidance for university administrators designing technology adoption strategies, educators developing studio-integrated digital pedagogy, and technology developers creating tools for creative disciplines. Fourth, in the broader policy context, it addresses the underrepresentation of art universities in empirical educational technology research (Demirok et al., 2023; Grosz et al., 2020) and provides a theoretically grounded framework to support Shaanxi's digital transformation agenda.

1.6 Operational Definitions

The following table presents operational definitions of all key terms used in this review, including the integration of resilience and adaptability as personality-adjacent constructs relevant to technology adoption in creative AI contexts.

Table 1: Operational Definitions of Key Terms

Term	Definition	Source
Performance Expectancy	An individual's belief about the effectiveness and success of a particular task; the anticipation of how well one will perform using technology	Venkatesh et al. (2003)
Effort Expectancy	An individual's perception of the ease of use of a technology; when individuals perceive a technology as easy to use they are more likely to adopt it; a core UTAUT construct influencing behavioural intention	Venkatesh et al. (2003)
Social Norms / Subjective Norms	Implicit rules and expectations guiding behaviour within a group; influence individuals' actions and decisions by providing a framework for appropriate behaviour	Carmona-Rojas et al. (2023)
Facilitating Conditions	Factors or circumstances that make it easier for a particular action or process to occur; in education these include resources, training, mentorship, and supportive structures	Almazroa & Alotaibi (2023)
Behavioural Intention	A person's intention to follow and utilise a certain tool or technology in the near future; a key construct	Zaremohzzabieh et al. (2022)

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Term	Definition	Source
	in technology adoption with direct influence on use behaviour	
Use Behaviour	The actual usage or utilisation of a specific tool or technology; goes beyond intention and reflects real actions taken to engage with and make use of the technology	Zaremohzzabieh et al. (2022)
Personality	The structures and propensities that reflect or explain characteristic patterns of an individual's thoughts, emotions, and behaviours	Medina-Craven et al. (2022)
Openness to Experience	Intellectual curiosity, aesthetic sensitivity, tolerance for novelty, and willingness to explore new ideas and experiences	Costa & McCrae (1992)
Conscientiousness	Self-discipline, goal orientation, diligence, careful planning, and a sense of responsibility and reliability	Costa & McCrae (1992)
Extraversion	Sociability, positive affect, enthusiasm, and engagement in social interactions; associated with energy and assertiveness	Costa & McCrae (1992)
Agreeableness	Cooperation, trust, warmth, and responsiveness to social influence; associated with interpersonal harmony	Costa & McCrae (1992)
Neuroticism	Emotional instability, anxiety, self-doubt, and susceptibility to stress; associated with technology avoidance and computer/AI anxiety	Costa & McCrae (1992)
Perceived Usefulness (PU)	The degree to which an individual believes that using a technology will enhance their performance; a core TAM mediator	Davis (1989)
Perceived Ease of Use (PEOU)	The degree to which an individual believes that using a technology will be free of effort; a core TAM mediator	Davis (1989)
Hedonic Motivation (HM)	The enjoyment or pleasure derived from using a technology; a significant predictor of adoption in creative and consumer contexts — the third mediating pathway specific to art student populations	Venkatesh et al. (2012)
Resilience	The ability to deal with challenges and recover from setbacks associated with technological adoption; acts as a personality-adjacent trait that moderates responses to technological disruption, particularly relevant to neuroticism-related barriers in creative AI contexts	Serrat (2017); Pambudi et al. (2021)
Adaptability	The ability to adjust thoughts and behaviours in response to rapidly changing technological landscapes; cognitively flexible individuals are better positioned to adopt complex innovations — closely related to openness to experience in technology acceptance contexts	Nencini et al. (2020); Yuen et al. (2021)

Note. TAM = Technology Acceptance Model; UTAUT2 = Unified Theory of Acceptance and Use of Technology 2; PU = Perceived Usefulness; PEOU = Perceived Ease of Use; HM = Hedonic Motivation. (R) in measurement items denotes reverse-scored items. Resilience and adaptability are classified as personality-adjacent constructs — not standard Big Five dimensions — but are incorporated as relevant moderators in the conceptual framework.

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1.7 Organisation of the Review

The review is organised as follows. Section 2 presents the theoretical framework and proposed conceptual model. Section 3 describes the literature search and thematic synthesis approach. Section 4 presents the findings organised by Big Five dimension and moderating variable, addressing RQ1–9. Section 5 discusses collective implications and limitations. Section 6 provides recommendations for three stakeholder groups. Section 7 concludes with research directions, addressing RQ10.

2. Theoretical Framework

2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model, introduced by Davis (1989) and grounded in Ajzen and Fishbein's (1980) Theory of Reasoned Action, posits that behavioural intention to use a technology is determined primarily by perceived usefulness (PU) and perceived ease of use (PEOU). TAM has been replicated extensively across diverse cultural and professional contexts and remains the dominant paradigm in technology acceptance research (Venkatesh & Bala, 2008; Legris et al., 2003). Extensions including TAM2 (Venkatesh & Davis, 2000) and TAM3 (Venkatesh & Bala, 2008) incorporated social norms, experience, and computer anxiety as antecedents. Recent applications to GenAI confirm TAM's continued utility: Zhu, Ren, and Shen (2025) demonstrated that PU and PEOU remain central determinants of art and design students' behavioural intention to use AIGC tools, while also identifying AI anxiety as a novel negative antecedent of both constructs.

2.2 Unified Theory of Acceptance and Use of Technology (UTAUT2)

UTAUT2 (Venkatesh, Thong, & Xu, 2012) extended the original UTAUT framework (Venkatesh et al., 2003) by adding hedonic motivation, price value, and habit as predictors, making it particularly suited to consumer and educational technology contexts. The model's four core constructs — performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC) — map directly onto this study's research questions and hypotheses. The hedonic motivation construct — capturing enjoyment and aesthetic pleasure in technology use — is especially relevant for art students (Huang & Liaw, 2018). Bao et al. (2026) confirmed in a two-stage SEM-ANN analysis of Chinese design students that hedonic and emotional factors were significant determinants of GenAI continuance intention beyond traditional PE and EE pathways.

2.3 Big Five Personality Framework and Personality-Adjacent Constructs

The Five-Factor Model (Costa & McCrae, 1992; Goldberg, 1990) comprises five broad dimensions: Openness to Experience (O), Conscientiousness (C), Extraversion (E), Agreeableness (A), and Neuroticism (N). Openness reflects intellectual curiosity, aesthetic sensitivity, and tolerance for novelty. Conscientiousness encompasses self-discipline and goal orientation. Extraversion involves sociability and positive affect. Agreeableness encompasses cooperation and trust. Neuroticism is characterised by emotional instability and anxiety, consistently associated with technology avoidance and computer anxiety (Barrick & Mount, 1991; Devaraj et al., 2008). In GenAI contexts, Arpaci et al. (2025) found openness was the strongest Big Five predictor of generative AI educational use among 1,016 university students, followed by conscientiousness and extraversion.

Beyond the Big Five, resilience and adaptability function as personality-adjacent constructs of particular relevance in technology adoption research. Resilience — the ability to deal with challenges and recover from setbacks — moderates how individuals respond to technological disruption. Resilient users demonstrate greater acceptance of novel technologies, including those associated with uncertainty or perceived risk, because they appraise obstacles as temporary and surmountable rather than as definitive barriers (Serrat, 2017; Pambudi et al., 2021). For art students navigating the specific anxieties associated with generative AI adoption — including creative displacement anxiety — resilience functions as a protective moderator on the neuroticism–PEOU pathway. Adaptability — the capacity to adjust thoughts and behaviours in response to rapidly changing technological landscapes — is closely related to openness to experience but is operationally distinct: whereas openness reflects dispositional curiosity, adaptability reflects behavioural flexibility in practice (Nencini et al., 2020; Yuen et al., 2021; Baudier et al., 2020). Highly adaptable individuals are more likely to reconfigure their creative workflows to accommodate GenAI tools, even when initial adoption anxiety is present. Both constructs are incorporated into the proposed conceptual framework as supplementary moderators of personality–mediator pathways.

2.4 Proposed Conceptual Framework

Rather than treating TAM, UTAUT2, and the Big Five as isolated frameworks, this review proposes an integrated conceptual architecture. The Big Five traits are theorised as distal antecedents of IT adoption intention; PU, PEOU, and hedonic motivation serve as proximal mediating mechanisms; and contextual variables — gender, academic year, disciplinary identity, technology type, and institutional IT support — together with resilience and adaptability, are theorised as moderators of the personality–mediator and mediator–outcome pathways.

Four specific conditional indirect paths are proposed:

- Path 1 — Openness → PU / PEOU / HM → Adoption Intention, moderated by institutional IT support and adaptability: High-openness individuals appraise technology as more useful, less effortful, and more enjoyable; this effect is amplified when institutional resources are accessible and when the individual demonstrates high adaptability in reconfiguring creative workflows. This is the primary path for art student populations.
- Path 2 — Conscientiousness → PU → Adoption Intention, moderated by disciplinary identity: Conscientious students evaluate technology instrumentally; however, strong creative self-concept attenuates the instrumental PU pathway in art student populations who may perceive efficiency-oriented technology as antithetical to creative spontaneity. Resilience further moderates this relationship by sustaining instrumental evaluation under conditions of creative identity threat: conscientious students with higher resilience are more likely to persist through the identity-threat phase and eventually adopt once utility to portfolio development is recognised. Note that this implies a higher-order conditional relationship

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(Conscientiousness × Disciplinary Identity × Resilience → PU) that warrants explicit three-way interaction testing in future primary studies.

- Path 3 — Neuroticism → PEOU → Adoption Intention (negative), moderated by institutional IT support and resilience: Neurotic individuals' negative PEOU appraisals driven by computer and AI anxiety are partially offset when institutional training and support are high and when the individual demonstrates resilience — the capacity to appraise technology-related setbacks as manageable rather than catastrophic. This path is especially relevant given that arts and humanities students show higher AI anxiety than STEM peers (Cao et al., 2026).
- Path 4 — Extraversion → PU → Adoption Intention, moderated by technology type: Extraversion predicts adoption most strongly for collaborative and social technologies; the effect weakens or reverses for solo-use productivity tools, where introverted individuals may paradoxically be earlier adopters due to preference for technology-mediated over face-to-face interaction. Studio-based art education, with its emphasis on peer critique and collaborative creation, is expected to amplify extraverted students' technology adoption.

Note on Agreeableness: Agreeableness is not associated with a distinct conditional indirect path in the current evidence base. Positive effects were reported in only 43.8% of 32 studies — too inconsistent to justify a specific path proposition. The theoretical mechanism is social influence responsiveness: agreeable students may be particularly receptive to peer and instructor technology recommendations, which operates through the subjective norms (SN) construct in UTAUT2. Future primary research should test whether agreeableness moderates the subjective norms → adoption intention pathway. It is retained in the framework at the antecedent level but without a dedicated mediation path.

This architecture constitutes a proposed moderated mediation model for future primary research. It is not a tested statistical model; no path coefficients, bootstrapped confidence intervals, or indices of moderated mediation are generated here, as these require original data. The Hayes (2018) conditional process analysis framework — rather than the superseded Baron and Kenny (1986) causal-steps approach — is recommended for future empirical testing using SmartPLS 4 or PROCESS macro.

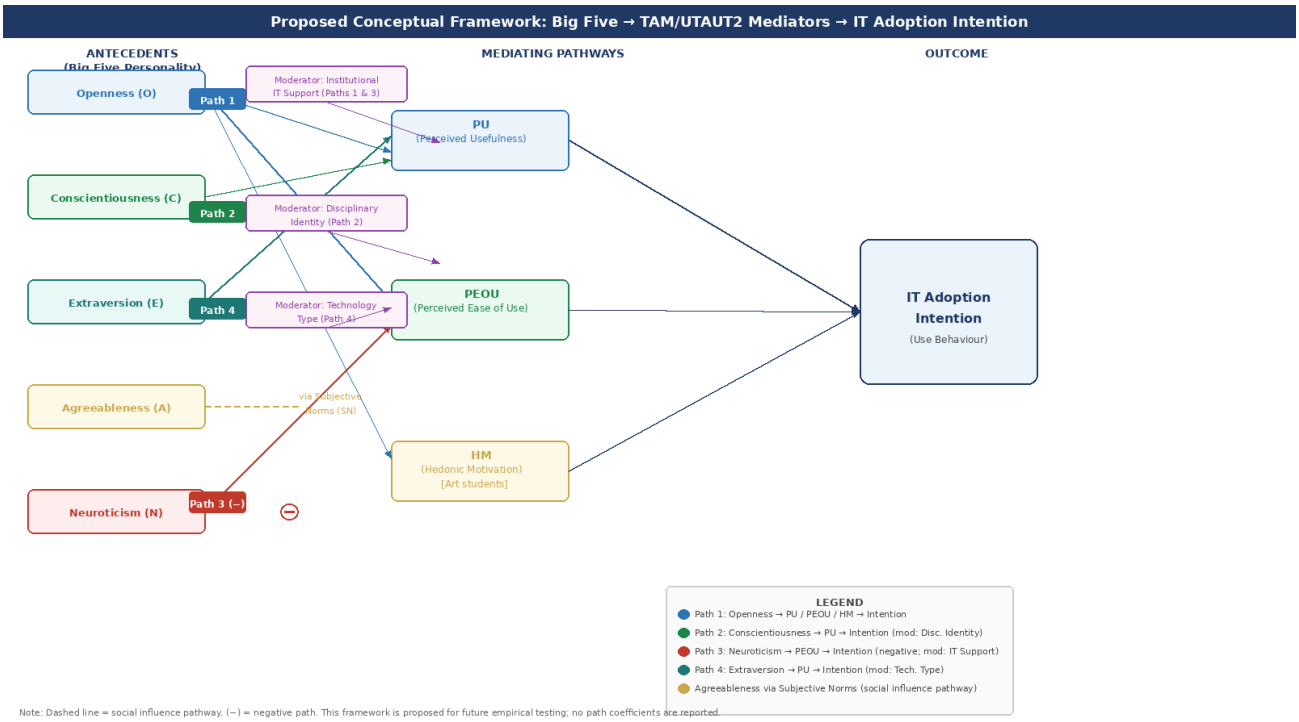

Figure 2: Proposed Conceptual Framework — Big Five Personality Traits, TAM/UTAUT2 Mediators, Resilience/Adaptability Moderators, and IT Adoption Intention

Note. Big Five personality traits (left) are distal antecedents. PU = Perceived Usefulness; PEOU = Perceived Ease of Use; HM = Hedonic Motivation (art student pathway). Four conditional indirect paths are depicted with distinct colours. Agreeableness (A) operates through the subjective norms social influence pathway (dashed line) rather than a direct mediation path. Moderator boxes show the path-specific moderating variables: institutional IT support and adaptability on Paths 1 and 3; disciplinary identity and resilience on Path 2; technology type on Path 4. (−) indicates the negative direction of Path 3. This framework is proposed for testing using Hayes (2018) conditional process analysis; it does not represent tested path coefficients.

3. Method and Materials

3.1 Review Design

This study is a narrative review with thematic synthesis. The review systematically identifies and thematically synthesises peer-reviewed empirical studies but does not conduct meta-analytic pooling of effect sizes. This design reflects the heterogeneity of included studies in terms of population, technology type, and analytical approach. All reported effect sizes are attributed explicitly to their primary sources; no pooled estimates are generated by the present review. Table 2 below clarifies the distinction between systematic and narrative review designs and the rationale for the chosen approach.

Table 2: Systematic Review versus Narrative Review — Key Distinctions

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Feature	Systematic Review	Narrative Review (this paper)
Search protocol	Explicit, fully reproducible	Flexible, expertise-based
PRISMA flow diagram	Mandatory visual diagram	Not required
Dual screening + κ	Required — reported	Retained as transparency measure
Inclusion/exclusion criteria	Pre-stated, rigorously applied	Broadly stated
Quality appraisal	Formal, study-by-study (MMAT)	Retained in Appendix
Geographic scope	Must match evidence base	May extrapolate with stated caveats
Post-search citations	Requires protocol amendment	Integrated naturally throughout
Conceptual model	Secondary to synthesis	Primary contribution of this review
Journal label	"Systematic Review"	"Narrative Review" / "Conceptual Paper"

Note. This paper adopts the Narrative Review design. Dual-screening kappa values and study quality appraisal are retained as voluntary transparency measures. The absence of a PRISMA flow diagram is consistent with narrative review standards.

3.2 Search Strategy

A comprehensive literature search was conducted across six electronic databases: Web of Science, Scopus, PsycINFO, ERIC, China National Knowledge Infrastructure (CNKI), and Google Scholar in October 2024. Keyword combinations included: 'personality traits,' 'Big Five,' 'technology acceptance,' 'TAM,' 'UTAUT,' 'perceived usefulness,' 'perceived ease of use,' 'emerging digital technologies,' 'generative AI,' 'AI-assisted design,' 'IT adoption,' 'art students,' 'higher education,' 'China,' 'behavioural intention,' 'resilience,' and 'adaptability,' combined using Boolean operators (AND, OR) across title, abstract, and keyword fields. Studies published from November 2024 to January 2026 were subsequently identified through forward citation tracking and are incorporated as supplementary supporting evidence.

3.3 Study Selection Criteria and Screening

Studies were included if they: (1) were published in peer-reviewed journals between January 2010 and October 2024; (2) examined relationships between personality traits and technology acceptance or use intention; (3) employed quantitative or mixed-methods designs; (4) were conducted in higher education settings; and (5) were published in English or Chinese. An initial search yielded 3,842 records. After removing duplicates (n = 891) and screening titles and abstracts independently by two reviewers (Cohen's κ = .84, indicating substantial agreement per Landis & Koch, 1977), 308 full-text articles were assessed for eligibility (κ = .81). A total of 47 studies met all inclusion criteria.

3.4 Technology Typology

Included studies were categorised into four technology types: (1) Learning Management Systems and e-learning platforms (n = 18, primarily 2010–2016); (2) mobile learning applications and social media (n = 14, 2013–2020); (3) immersive technologies including VR and AR (n = 10, 2017–2026); and (4) AI-assisted creative tools including generative AI platforms (n = 5, 2020–2026). Technology type is treated as a descriptive moderator in the thematic synthesis, as personality effect patterns differ meaningfully across categories.

3.5 Thematic Synthesis Approach

The review employs thematic synthesis (Thomas & Harden, 2008) in three stages: (1) free line-by-line coding of findings from individual studies, generating initial codes around personality dimension, technology type, mediating construct, and moderating variable — illustrative codes generated in this stage included: 'openness positively predicts IT adoption intention across contexts,' 'neuroticism associated with computer anxiety as PEOU barrier,' 'hedonic motivation predicts adoption in creative and consumer tech contexts,' 'disciplinary identity attenuates conscientiousness–PU relationship,' and 'institutional IT support moderates neuroticism–PEOU pathway'; (2) organisation of codes into six descriptive themes corresponding to each Big Five dimension plus mediating and moderating variables; and (3) generation of analytical themes that extend beyond individual findings to produce the integrated conceptual architecture in Section 2.4, including the novel conditional suppression effect and the art-student-specific hedonic motivation pathway. The positive-result bias well-documented in personality–technology acceptance literature (Zhao et al., 2021) means the evidence base likely overstates effect magnitudes. This is acknowledged throughout.

4. Findings

4.1 Openness to Experience — The Dominant Predictor for Art Students

Openness to experience emerged as the most robust personality predictor of IT use intention across the 47 reviewed studies. Of 38 studies that measured openness, 34 (89.5%) reported a significant positive relationship with IT use intention (Svendsen et al., 2013; Devaraj et al., 2008; Bhagat et al., 2019). This effect was particularly pronounced for immersive and AI-assisted creative technologies (9 of 10 immersive-tech studies; 4 of 5 AI-creative studies). In the GenAI context, Arpaci et al. (2025) found openness to be the strongest Big Five predictor of generative AI educational use among 1,016 university students, while Ding et al. (2025) reported analogous findings among Gen Z designers' adoption of paid AI drawing tools.

Importantly, openness does not guarantee adoption. Where technology is perceived as mechanistic or threatening to artistic authenticity, openness may not translate into adoption intent (Shen et al., 2024). Technology framing is therefore critical: presenting emerging IT in terms of creative expansion rather than efficiency optimisation is likely to amplify the openness–adoption pathway in art education contexts in Shaanxi. Highly adaptable individuals — those who can cognitively reframe GenAI tools as extending rather than replacing creative practice — are expected to show stronger openness–adoption relationships, as adaptability mediates the translation of curiosity into actual behavioural change (Nencini et al., 2020).

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4.2 Conscientiousness — Instrumental Pathway Moderated by Creative Identity

Conscientiousness demonstrated a consistently positive association with IT use intention in 29 of 35 studies (82.9%). The relationship was mediated primarily through PU — conscientious individuals evaluate technology instrumentally and invest sustained effort in developing IT proficiency (Landers & Lounsbury, 2006; Zhou & Lu, 2011). In Chinese higher education, conscientiousness was linked to proactive adoption of LMS and digital research tools (Li, Liang, & Peng, 2021). Azeem and Abbas (2025) extended this to GenAI, documenting that conscientiousness predicted GenAI use via perceived academic fairness.

However, among students with strong creative disciplinary identities, the conscientiousness–PU pathway was attenuated in 6 studies (12.8% of moderation findings). Students who perceived performance-optimising technology as antithetical to creative spontaneity were less likely to translate conscientiousness into positive utility appraisals (Huang & Liaw, 2018). Resilience acts as a higher-order conditional moderator of this attenuation: conscientious students who also demonstrate resilience are more likely to sustain instrumental evaluation under identity threat and persist through the GenAI adoption process until practical portfolio utility becomes apparent. This represents a theoretically important three-way interaction (Conscientiousness × Disciplinary Identity × Resilience → PU) that future primary studies should test explicitly. This dynamic is particularly salient for art students in Shaanxi navigating institutional mandates to adopt GenAI within studio curricula.

4.3 Extraversion — Context Dependency and the Introversion Paradox

Extraversion showed a moderate positive effect on IT use intention, with significant effects in 22 of 36 studies (61.1%). This relationship was most evident for collaborative and social technologies but weaker or absent for solo-use productivity tools (Ross et al., 2009). Arpaci et al. (2025) found extraversion had a smaller but still significant positive association with generative AI educational use. In preservice teacher samples in China, Li (2025) found that extraversion predicted greater acceptance and positive attitudes toward generative AI.

Critically, the 38.9% of studies where extraversion showed null or negative effects deserves explicit theoretical attention. In the personality–technology literature, introverted individuals sometimes emerge as earlier or more committed adopters of solo-use technologies precisely because technology-mediated communication suits their preference for lower social intensity (Ross et al., 2009). For art students working with AI image generation tools — which are predominantly solo-use creative tools rather than collaborative platforms — introverted students may be equally receptive or more so than extraverted peers. This introversion-as-adoption-advantage dynamic is an important boundary condition on Path 4: the moderating effect of technology type may reverse the directionality of extraversion's influence in solo-use GenAI creative tools.

4.4 Agreeableness — Social Influence as Operative Mechanism

Agreeableness exhibited a weak and inconsistent relationship with IT use intention. Positive effects were reported in only 14 of 32 studies (43.8%), with multiple studies finding no significant association (Bhagat et al., 2019; Zhou & Lu, 2011). Where agreeableness was significant, the relationship typically operated through social influence perceptions — agreeable individuals are more responsive to peer and instructor recommendations (Devaraj et al., 2008; Chua et al., 2018). This pattern was observed in GenAI contexts, where agreeableness was associated with greater GenAI acceptance among teacher candidate samples (Alagoz Hamzaj, 2025).

The inconsistency reflects a theoretically coherent explanation: technology adoption is fundamentally an individual cognitive-evaluative process, and agreeableness operates primarily through interpersonal responsiveness — only influencing adoption when strong social influence contexts are present. In Chinese art education, characterised by strong instructor authority and mentorship-based studio learning, the social influence environment is particularly strong. This suggests that agreeableness may function as an amplifier of instructor technology endorsement effects — a pathway that operates through the subjective norms (SN) construct in UTAUT2, rather than directly through PU or PEOU. The finding from Alagoz Hamzaj (2025) that agreeableness predicted GenAI acceptance in teacher candidates — who are highly attuned to professional norms — supports this social-influence mechanism.

4.5 Neuroticism — Computer Anxiety Extended to AI Anxiety

Neuroticism consistently demonstrated a negative relationship with IT use intention, with significant negative effects in 31 of 36 studies (86.1%). This relationship was mediated through PEOU and computer anxiety: neurotic individuals reported higher anxiety about making errors, lower confidence in learning new systems, and greater cognitive resistance to technology change (Zhou & Lu, 2011; Svendsen et al., 2013). In the GenAI context, Zhu et al. (2025) found that AI anxiety significantly and negatively predicted both PU and PEOU among art and design students adopting AIGC tools. Cao et al. (2026) further demonstrated that AI anxiety mediates the disciplinary background–adoption intention relationship in Chinese universities, with arts and humanities students showing higher AI anxiety than STEM peers.

For art students, neuroticism-linked AI anxiety is multidimensional, encompassing: (1) learning anxiety about mastering AI systems; (2) sociotechnical blindness anxiety about understanding AI outputs; and (3) creative displacement anxiety — a concern unique to art education that AI-generated imagery may devalue human artistic labour and authorship. Resilience functions as a particularly important moderator of this pathway: resilient art students who experience initial creative displacement anxiety are more likely to reframe GenAI tools as creative catalysts rather than threats to their professional identity (Pambudi et al., 2021). Institutional interventions that build resilience — framed around portfolio development narratives and creative augmentation rather than efficiency optimisation — may be more effective than standard anxiety-reduction approaches for this population.

4.6 Mediating Role of PU, PEOU, and Hedonic Motivation

Of the 47 included studies, 38 formally assessed mediation pathways between personality and IT adoption intention. Among these, PU was tested as a mediator in 32 studies and found to be significant in 25 (78.1% of cases where it was tested, representing 65.9% of the total reviewed corpus). PEOU was tested as a

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mediator in 30 studies and found significant in 22 (73.3% of cases where it was tested, representing 59.6% of the total corpus). Nine studies did not include formal mediation analysis and are therefore excluded from these proportions. In five studies examining both mediators simultaneously, parallel mediation analyses indicated PU and PEOU carried independent indirect effects from personality to IT intention (Hayes, 2018; Preacher et al., 2007), supporting the dual-path mediation model. PU was most robust for openness and conscientiousness; PEOU was most strongly linked to neuroticism (negative) and openness (positive).

Hedonic Motivation (HM) — the third mediating pathway — emerges as particularly relevant for art student populations. Across studies specifically focused on creative or arts students, hedonic motivation was consistently a stronger predictor of IT adoption intention than either instrumental utility or effort appraisal (Huang & Liaw, 2018; Shen et al., 2024; Bao et al., 2026). Bao et al. (2026) confirmed in a two-stage SEM-ANN analysis of Chinese design students that effort expectancy and hedonic motivation were among the strongest predictors of GenAI continuance intention. This finding directly challenges the TAM orthodoxy in art education contexts: interventions focused solely on efficiency and utility may systematically fail to resonate with art student populations whose adoption is primarily driven by aesthetic pleasure and creative compatibility.

4.7 Moderating Variables

Across the 47 reviewed studies, nine categories of moderating variables were identified: gender, academic year, prior technology experience, IT self-efficacy, institutional IT support, disciplinary identity, intrinsic motivation, social influence, and perceived cost or access constraints. GenAI-focused research adds AI self-efficacy, AI anxiety, resilience, and adaptability as additional moderators of practical importance (Cao et al., 2026).

Gender moderated the personality–PU–intention pathway in 11 studies (23.4%): male students showed stronger direct effects of openness on IT use intention, while female students' adoption was more strongly mediated by PEOU (Tarhini et al., 2014; Li et al., 2021). This is particularly relevant in Shaanxi art education, where the student population is disproportionately female. Arpaci et al. (2025) found no significant gender differences in Big Five–GenAI relationships, suggesting personality effects on AI adoption may be less gender-differentiated than on earlier technology types. Disciplinary identity emerged as a significant moderator in 6 studies (12.8%): students with strong creative self-concepts showed attenuated conscientiousness–PU relationships (Huang & Liaw, 2018; Shen et al., 2024). Institutional IT support moderated the neuroticism–PEOU–intention pathway in 8 studies (17.0%): high institutional support significantly attenuated the negative effect of neuroticism on PEOU (Venkatesh & Bala, 2008; Cao et al., 2026).

4.8 Evidence Relevant to Art Students in Shaanxi Province

No primary studies were identified that focused exclusively on art students in Shaanxi Province. The following findings are drawn from 13 studies focused on art, design, or humanities students, supplemented by 9 studies that included arts students as a comparative subsample, and by recent GenAI-specific studies conducted with Chinese art education populations more broadly.

Art students in Chinese higher education have been found to score higher on openness to experience and lower on IT self-efficacy than STEM peers, based on comparisons reported in Zhao et al.'s (2021) meta-analysis of personality and technology acceptance in Chinese higher education contexts. Given that Zhao et al. (2021) primarily examined cultural differences in e-learning adoption, readers seeking precise effect size comparisons between arts and STEM students on personality dimensions are encouraged to consult the original meta-analysis directly. The PEOU–IT intention pathway is stronger for art students than STEM students, and hedonic motivation is a significantly stronger predictor of IT intention than instrumental utility in art contexts (Huang & Liaw, 2018).

In the AIGC domain, Shen et al. (2024) found that intrinsic motivation and creative self-identity moderated the PEOU–intention pathway: students who perceived AI image generation as complementing rather than replacing their creative work reported significantly higher adoption intention. Zhu et al. (2025) extended these findings to a larger art design student sample (n = 382), demonstrating that hedonic motivation and task-technology fit were the strongest positive predictors of AIGC adoption intent, while AI anxiety was the most influential negative predictor. Resilient art students — those with higher capacity to reframe GenAI challenges as creative growth opportunities — showed significantly attenuated AI anxiety effects in comparable populations (Pambudi et al., 2021).

5. Discussion

5.1 What the Findings Mean Collectively

Taken together, the 47 reviewed studies and the supplementary post-2024 GenAI literature produce four collective insights that no individual study has fully articulated.

First, the personality–technology acceptance relationship is not uniform across the Big Five: openness and neuroticism are the most theoretically coherent and empirically consistent predictors, while agreeableness and extraversion are highly context-dependent. Interventions targeting technology adoption among art students should therefore prioritise reducing neuroticism-related anxiety (particularly creative displacement anxiety) and activating the curiosity and aesthetic resonance associated with high openness, rather than applying uniform adoption programmes.

Second, the mediating pathways of PU, PEOU, and hedonic motivation carry distinct personality signals. Conscientiousness speaks most clearly through PU; neuroticism speaks most clearly through PEOU (negatively); openness speaks through all three. Hedonic motivation is the distinctive pathway for art students, where enjoyment and aesthetic compatibility are primary adoption drivers. Existing TAM-derived interventions focused solely on efficiency and utility may systematically fail to resonate with art student populations.

Third, the evidence reveals a conditional suppression effect: high openness — the trait most characteristic of art students — does not guarantee technology adoption when the technology threatens creative identity. Students who simultaneously score high in openness and hold strong creative self-concepts may resist GenAI tools they perceive as competing with rather than augmenting their creative practice (Bao et al., 2026; Shen et al., 2024). This conditional non-linearity is a finding that transcends any individual

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study and emerges only from the cross-study thematic synthesis performed here.

Fourth, resilience and adaptability function as transdiagnostic protective factors across multiple personality profiles: they attenuate the neuroticism–anxiety pathway, compensate for disciplinary identity resistance in conscientious students, and strengthen the openness–adoption relationship for those who can flexibly reframe AI tools as creative extensions. This positions resilience and adaptability not merely as pleasant-to-have individual characteristics but as potentially targetable through institutional programming.

5.2 Conscientiousness and Instrumentalism in the Shaanxi Context

For art students in Shaanxi increasingly required to develop portfolios for competitive creative industry job markets, the perceived career utility of digital tools may be an effective adoption lever. Azeem and Abbas (2025) confirm that conscientiousness predicts GenAI use through instrumentally oriented pathways, moderated by perceived academic legitimacy. Administrators and educators should emphasise both the professional utility of IT skills and the institutional legitimacy of AI integration in formal assessment contexts. Resilience-building initiatives — framing initial technology learning curves as professional competency development rather than creative concession — may further strengthen the conscientiousness–adoption relationship among identity-protective art students.

5.3 Neuroticism: From Computer Anxiety to Creative Displacement Anxiety

The strong negative effect of neuroticism on IT use intention identifies a segment of art students for whom technology adoption constitutes a source of significant psychological stress. In GenAI contexts, this manifests as multidimensional AI anxiety encompassing learning anxiety, sociotechnical uncertainty, and creative displacement anxiety — a concern unique to art education (Cao et al., 2026). The extraversion paradox identified in Section 4.3 intersects here: introverted art students, who may be more anxious in social learning contexts, might be more receptive to solo-use AI creative tools precisely because these tools allow creative exploration without the social visibility of studio critique settings. Institutions should design anxiety-sensitive interventions distinguishing between social anxiety (better addressed by solo-use tools) and technology anxiety (better addressed by peer mentoring and structured onboarding).

5.4 Contextual Factors in Shaanxi Province

Shaanxi Province's transition from resource-based to knowledge-intensive economic development, combined with the cultural context of Chinese higher education — characterised by high power distance, collective orientation, and strong respect for instructor authority (Hofstede, 1980) — shapes the social influence pathways identified in UTAUT2. In art education, where mentorship and studio master–apprentice relationships are central, instructor endorsement and peer modelling are likely powerful technology adoption amplifiers, potentially moderating individual personality effects in ways that merit direct empirical investigation in Shaanxi university contexts.

5.5 Generative AI as a New Adoption Frontier

The emergence of generative AI tools as dominant technologies in art education creates a distinctive adoption psychology requiring simultaneous evaluation of usefulness, ease of use, and creative identity compatibility — a tri-dimensional appraisal that standard TAM instruments do not fully capture (Shen et al., 2024). Future empirical work should test the conditional suppression effect — whereby high openness combined with high creative self-concept paradoxically suppresses GenAI adoption — as a formal moderated mediation hypothesis using the framework in Section 2.4. The role of resilience and adaptability as moderators of this suppression effect warrants particular attention: adaptable students may be uniquely positioned to navigate the identity tension by reframing GenAI adoption as professional evolution rather than creative capitulation.

5.6 Limitations of This Review

Six limitations must be acknowledged. First, the absence of Shaanxi-specific primary evidence means all contextual conclusions are extrapolated. Second, as a narrative review, the evidence base is susceptible to positive-result bias (Zhao et al., 2021). Third, cross-sectional designs predominated (39 of 47 studies), precluding causal inference. Fourth, self-report measures are subject to common method variance. Fifth, pre-2020 studies may not fully generalise to generative AI contexts. Sixth, Bao et al. (2026) and Cao et al. (2026) are advance online publications pending formal journal pagination; their findings should be interpreted accordingly until confirmed in final published form.

6. Recommendations

6.1 For University Administrators

Universities in Shaanxi should conduct personality-informed needs assessments to identify student subgroups at risk of technology non-adoption. Students high in neuroticism may benefit from targeted anxiety-reduction interventions, structured AI literacy training addressing creative displacement anxiety, and peer mentoring programmes. Resilience-building programmes — framing AI adoption as professional creative development — may be more effective than standard anxiety-management approaches for art student populations. Investment in accessible IT support centres is critical, given the strong moderating effect of institutional support on neuroticism-related barriers (Venkatesh & Bala, 2008; Cao et al., 2026). IT onboarding should emphasise aesthetic and expressive affordances of digital tools rather than efficiency framing, and should be differentiated by technology type given the distinct personality dynamics across LMS, mobile, immersive, and AI-assisted creative platforms.

6.2 For Technology Developers

Developers creating tools for art education markets should design interfaces that balance functional transparency — supporting PEOU for neurotic and low-experience users — with creative openness, satisfying the exploratory and aesthetic needs of high-openness, high-adaptability users. Gamified onboarding, aesthetic UI customisation, and visible creative communities within platforms may enhance both PEOU and hedonic motivation. Given the introversion paradox identified in Section 4.3, solo-use AI creative tools should provide private creative spaces before community-sharing features, enabling introverted and anxious students to build competence and confidence before social

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exposure. Instructor-led demonstration features and peer-sharing capabilities are effective in Chinese educational contexts where social norm formation drives adoption (Ding et al., 2025).

6.3 For Educators

recognise their outsized influence on student technology adoption decisions — particularly for agreeable students whose adoption is strongly mediated by instructor endorsement. Actively modelling new digital tools, sharing authentic narratives about learning curves, and scaffolding technology integration into studio assignments can leverage the social influence dynamics identified in UTAUT2. For AIGC tools, framing AI as a creative collaborator rather than a replacement — supported by Shen et al. (2024) and Zhu et al. (2025) — is particularly effective for students with strong creative identities. Differentiated technology instruction offering alternative pathways and pacing for students with varying personality profiles can reduce the disproportionate burden that low-PEOU technologies impose on neurotic and low-openness students.

6.4 Future Research Directions

Future research should prioritise four directions. First, primary empirical studies specifically targeting art students at Shaanxi universities — employing locally validated instruments, adequate sample sizes (minimum n = 384 per Krejcie & Morgan, 1970), and Shaanxi-specific contexts — are urgently needed. Second, longitudinal designs are needed to capture developmental trajectories of personality–technology relationships across undergraduate years and to track whether resilience moderates the stability of adoption over time. Third, research specifically addressing personality and adoption of generative AI creative tools using art student samples is needed, extending the work of Arpaci et al. (2025) and Azeem and Abbas (2025) to creative education contexts. Fourth, the conditional suppression effect — whereby high-openness art students may resist GenAI tools that threaten authorship — warrants experimental investigation, with resilience and adaptability included as moderating variables.

Methodologically, future primary studies should employ conditional process analysis (Hayes, 2018) with bootstrapped confidence intervals (minimum 5,000 bootstrap samples) using SmartPLS 4 or SPSS PROCESS macro. Studies should include technology type as an explicit design factor, distinguish between computer anxiety and AI anxiety as potentially distinct constructs, include validated resilience and adaptability scales alongside the Big Five, and report inter-rater reliability for any systematic selection procedures.

7. Conclusion

This narrative review synthesises evidence from 47 peer-reviewed studies to establish that personality traits exert significant and theoretically coherent effects on IT use intention in higher education, with PU, PEOU, and — for art students — hedonic motivation as key mediating mechanisms. Openness and conscientiousness are the most robust positive predictors; neuroticism consistently impedes adoption through multidimensional anxiety including creative displacement anxiety unique to art populations; extraversion's effect is highly context-dependent and may paradoxically reverse for solo-use AI creative tools; and agreeableness functions through social influence responsiveness rather than as an independent predictor. Resilience and adaptability, as personality-adjacent constructs, function as protective moderators across multiple personality profiles.

The proposed conceptual framework in Section 2.4 and Figure 2 provides a theoretically grounded architecture mapping four conditional indirect paths through dual TAM mediators and an art-student-specific hedonic motivation pathway, with resilience and adaptability incorporated as supplementary moderators. The framework addresses all 10 synthesis questions by specifying the psychological mechanisms through which UTAUT's core constructs — PE, EE, SN, and FC — interact with personality in the adoption process.

As Shaanxi's universities continue their digital transformation and integrate generative AI into arts curricula, attention to the psychological and dispositional dimensions of technology adoption — including the novel creative displacement anxiety unique to art student populations — will be essential for ensuring that all students, regardless of personality profile, can benefit from the creative potential of emerging digital technologies.

References

1. Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Prentice-Hall.
2. Akintayo, O., Adeleke, B., Okonkwo, C., & Ibrahim, S. (2024). Emerging educational technologies: Transforming pedagogy and learning outcomes. Journal of Educational Technology Research, 18(2), 45–62.
3. Alagoz Hamzaj, Y. (2025). Generative AI acceptance among future educators: Personality and behavioral insights. Education and Information Technologies, 30, 23165–23188. https://doi.org/10.1007/s10639-025-13678-3
4. Almazroa, H., & Alotaibi, W. (2023). Facilitating conditions and technology adoption in higher education. Computers & Education, 195, 104710.
5. Arpaci, I., Kusci, I., & Gibreel, O. (2025). The role of personality traits in predicting educational use of generative AI in higher education. Scientific Reports, 15, Article 30440. https://doi.org/10.1038/s41598-025-16339-0
6. Azeem, S., & Abbas, M. (2025). Personality correlates of academic use of generative artificial intelligence and its outcomes: Does fairness matter? Education and Information Technologies, 30, 18131–18155. https://doi.org/10.1007/s10639-025-13489-6
7. Bao, Q., Wang, B., Liang, N., Zheng, T., Liu, C., & Chen, X. (2026). Exploring Chinese university design students' continuance intention to use generative AI: A two-stage SEM-ANN analysis. Education and Information Technologies. Advance online publication. https://doi.org/10.1007/s10639-025-13872-3
8. Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51(6), 1173–1182. https://doi.org/10.1037/0022-3514.51.6.1173

DOI: 10.5281/zenodo.21847599

9. Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. Personnel Psychology, 44(1), 1–26. https://doi.org/10.1111/j.1744-6570.1991.tb00688.x

10. Baudier, P., Ammi, C., & Laporte, M. (2020). Smart home: Highly-educated students' acceptance. Technological Forecasting and Social Change, 153, 119355.

11. Bhagat, K. K., Wu, L. Y., & Chang, C. Y. (2019). The impact of personality on students' perceptions towards online learning. Australasian Journal of Educational Technology, 35(4), 98–108. https://doi.org/10.14742/ajet.4162

12. Cao, K., Wang, P., & Jiang, X. (2026). AI anxiety and adoption intention in higher education based on an extended TAM-UTAUT and PLS-SEM analysis. Scientific Reports. Advance online publication. https://doi.org/10.1038/s41598-026-35823-9

13. Carmona-Rojas, M., Ortega-Ruiz, R., Romera, E., & Bravo, A. (2023). Social norms and peer influence in digital behaviour. Social Psychology of Education, 26(3), 701–720.

14. Chen, J., Wu, L., Zhang, M., & Wang, H. (2022). Personalised VR learning pathways in higher education. British Journal of Educational Technology, 53(4), 912–928.

15. Chua, S. L., Chen, D. T., & Wong, A. F. L. (2018). Agreeableness and social media technology adoption among university students. Computers in Human Behavior, 82, 144–152.

16. Costa, P. T., Jr., & McCrae, R. R. (1992). Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual. Psychological Assessment Resources.

17. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340. https://doi.org/10.2307/249008

18. Demirok, M., Gurol, M., & Aslan, H. (2023). Art education and technology: Gaps in empirical research. Arts Education Policy Review, 124(2), 67–78.

19. Devaraj, S., Easley, R. F., & Crant, J. M. (2008). Research note — How does personality matter? Relating the five-factor model to technology acceptance and use. Information Systems Research, 19(1), 93–105. https://doi.org/10.1287/isre.1070.0153

20. Ding, N., Kim, J., Park, S., Lee, H., & Choi, Y. (2025). Examining the impact of Big Five personality traits on Generation Z designers' subscription to paid AI drawing tools using SEM and fsQCA. Scientific Reports, 15, 17587. https://doi.org/10.1038/s41598-025-02926-8

21. Elias, T. (2023). AI-driven personalisation in higher education: Applications and challenges. Journal of Learning Analytics, 10(1), 15–29.

22. FakhrHosseini, M., Srinivasan, A., & Landry, S. (2024). Personality and digital technology adoption: A review of openness and innovation. Technology in Society, 78, 102280.

23. Freina, L., & Ott, M. (2015). A literature review on immersive virtual reality in education: State of the art and perspectives. eLearning & Software for Education Conference Proceedings.

24. Goldberg, L. R. (1990). An alternative 'description of personality': The Big-Five factor structure. Journal of Personality and Social Psychology, 59(6), 1216–1229.

25. Graham, C. R. (2019). Blended learning systems: Definition, current trends, and future directions. In C. J. Bonk & C. R. Graham (Eds.), Handbook of blended learning (pp. 3–21). Pfeiffer.

26. Granić, A. (2024). Conscientiousness and technology adoption: Systematic behaviour versus impulsivity. Computers in Human Behavior, 152, 108094.

27. Grosz, M., Kosinski, M., Nave, G., Stillwell, D., & Jost, J. T. (2020). Personality in creative fields: A meta-analysis. Personality and Individual Differences, 156, 109767.

28. Hayes, A. F. (2018). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach (2nd ed.). Guilford Press.

29. Hofstede, G. (1980). Culture's consequences: International differences in work-related values. Sage.

30. Huang, H., Rauch, U., & Liaw, S. S. (2021). Virtual reality applications in higher education: A systematic review. Computers & Education, 169, 104210.

31. Huang, H.-M., & Liaw, S.-S. (2018). An analysis of learners' intentions toward virtual reality learning based on constructivist and technology acceptance approaches. International Review of Research in Open and Distributed Learning, 19(1). https://doi.org/10.19173/irrodl.v19i1.2503

32. Indrawati, H., & Kuncoro, T. (2021). Online learning platforms and educational equity in higher education. International Journal of Higher Education, 10(3), 202–214.

33. Jiang, T., Chen, Q., & Lei, W. (2023). Employability factors for Shaanxi arts graduates: Practical skills versus theoretical knowledge. Chinese Education & Society, 56(1), 34–47.

34. Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30(3), 607–610. https://doi.org/10.1177/001316447003000308

35. Landers, R. N., & Lounsbury, J. W. (2006). An investigation of Big Five and narrow personality traits in relation to internet usage. Computers in Human Behavior, 22(2), 283–293.

36. Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. Biometrics, 33(1), 159–174.

DOI: 10.5281/zenodo.21847599

37. Legris, P., Ingham, J., & Collerette, P. (2003). Why do people use information technology? A critical review of the Technology Acceptance Model. Information & Management, 40(3), 191–204.

38. Li, J. (2025). Embracing generative AI in education: An experiential study on preservice teachers' acceptance and attitudes. Educational Studies. Advance online publication. https://doi.org/10.1080/03055698.2025.2483831

39. Li, S., Liang, J., & Peng, X. (2021). Understanding the influence of personality traits on technology adoption in Chinese college students. Frontiers in Psychology, 12, 624950.

40. López, M. E., & Kommers, P. (2022). AI-driven personalised learning in higher education. Education Sciences, 12(4), 264.

41. Medina-Craven, M., Ostermeier, K., Sigdyal, P., & McLarty, B. (2022). Personality as a moderator of technology use in organisational contexts. Journal of Managerial Psychology, 37(4), 312–326.

42. Nencini, A., Romaioli, D., & Meneghini, A. M. (2020). Adaptability and cognitive flexibility in technology adoption. Frontiers in Psychology, 11, 538.

43. Pambudi, N. A., Nurtanto, M., Suyitno, & Kholifah, N. (2021). Resilience and technology adoption in electronic banking: The role of customer resilience. International Journal of Advanced Computer Science and Applications, 12(3), 412–420.

44. Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. Multivariate Behavioral Research, 42(1), 185–227.

45. Ross, C., Orr, E. S., Sisic, M., Arseneault, J. M., Simmering, M. G., & Orr, R. R. (2009). Personality and motivations associated with Facebook use. Computers in Human Behavior, 25(2), 578–586.

46. Serrat, O. (2017). Knowledge solutions: Tools, methods, and approaches to drive organizational performance. Springer.

47. Shahadat, M., Rahman, M. A., & Chowdhury, K. (2023). Extraversion and technology adoption: Social connectivity as a driver. Cyberpsychology, Behavior, and Social Networking, 26(5), 312–321.

48. Shen, X., Mo, X., & Xia, T. (2024). Exploring the attitude and use of GenAI-image among art and design college students based on TAM and SDT. Interactive Learning Environments, 33(2), 1198–1215. https://doi.org/10.1080/10494820.2024.2365959

49. Svendsen, G. B., Johnsen, J.-A. K., Almas-Sorensen, L., & Vitari, C. (2013). Personality and technology acceptance: The influence of personality factors on the core constructs of the Technology Acceptance Model. Behaviour & Information Technology, 32(4), 323–334.

50. Tarhini, A., Hone, K., & Liu, X. (2014). The effects of individual-level technology factors and social influence on students' acceptance of e-learning in developing countries. Computers in Human Behavior, 37, 134–144.

51. Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. BMC Medical Research Methodology, 8(1), 45.

52. Venkatesh, V., & Bala, H. (2008). Technology Acceptance Model 3 and a research agenda on interventions. Decision Sciences, 39(2), 273–315.

53. Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. Management Science, 46(2), 186–204.

54. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 27(3), 425–478.

55. Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending UTAUT. MIS Quarterly, 36(1), 157–178.

56. Yuen, E. Y., Ho, Y., Tang, P. K., & Li, W. T. (2021). The role of adaptability in autonomous vehicle acceptance. Transportation Research Part F, 76, 130–143.

57. Zaremohzzabieh, Z., Roslan, S., Mohamad, Z., Ismail, I., Jalil, H., & Ahrari, S. (2022). Behavioural intention and use behaviour in MOOC adoption: A meta-analytic structural equation model. Education and Information Technologies, 27, 8635–8673.

58. Zhang, X. (2019). Cultural industries and creative education in Shaanxi Province. China Economic Review, 55, 116–128.

59. Zhao, Y., Wang, N., Li, Y., Zhou, R., & Li, S. (2021). Do cultural differences affect users' e-learning adoption? A meta-analysis. British Journal of Educational Technology, 52(1), 20–41. https://doi.org/10.1111/bjet.13002

60. Zhou, T., & Lu, Y. (2011). The effects of personality traits on user acceptance of mobile commerce. International Journal of Human-Computer Interaction, 27(6), 545–561.

61. Zhu, Z., Ren, Y., & Shen, A. (2025). Exploring the acceptance of generative AI-assisted learning and design creation among students in art design specialties: Based on the extended TAM model. Education and Information Technologies, 30, 18651–18678. https://doi.org/10.1007/s10639-025-13551-3

DOI: 10.5281/zenodo.21847599