How Psychological Experiences Shape Metaverse Adoption in Professional Settings: Evidence From China

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KEY TAKEAWAYS

Social presence → immersive flow, which increases usefulness and adoption intention.
Technology anxiety reduces adoption and weakens the flow → adoption effect.
Practical message: design for presence & flow, then remove anxiety barriers (training + intuitive interfaces).

PROBLEM AND MODEL

Background
• The metaverse enables immersive digital workspaces for collaboration and decision-making.
• Psychological experiences (social presence, flow) can shape adoption beyond technical features.

Gap
• Prior studies focus on technical features, neglecting psychological mechanisms in non-Western professional settings.
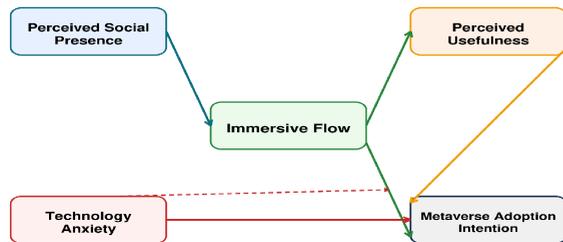
Research Question
How do perceived social presence, immersive flow, perceived usefulness, and technology anxiety shape metaverse adoption intention among Chinese professionals?
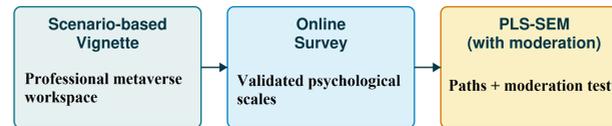
Hypotheses

• H1: Social presence → Flow (+)
• H2: Flow → Usefulness (+)
• H3: Usefulness → Adoption intention (+)
• H4: Flow → Adoption intention (+)
• H5: Technology anxiety → Adoption intention (−)
• H6: Technology anxiety weakens Flow → Adoption (moderation, −)

Conceptual Model

METHOD

Study Procedure

Scenario-based Vignette — Professional metaverse workspace → Online Survey — Validated psychological scales → PLS-SEM (with moderation) — Paths + moderation test

Behavioral realism: Participants first imagined a professional metaverse workspace before answering.

Design, Sample & Measures

Context: Chinese professionals evaluating metaverse use in workplace collaboration.
**Sample:** N = 402; sectors: technology, education, marketing, services (China).
Measures: Social presence, immersive flow, perceived usefulness, adoption intention, technology anxiety (established scales).
Analysis: PLS-SEM with moderation; bootstrapped significance tests.

Why this is credible
• Model explains 58% variance in adoption intention (R² = 0.58).
• All hypothesized paths significant (p < 0.01 or better).
• Scenario vignette increases psychological realism of professional metaverse use.

Direct effects on adoption intention (standardized β)

Usefulness +0.41
Immersive Flow +0.34
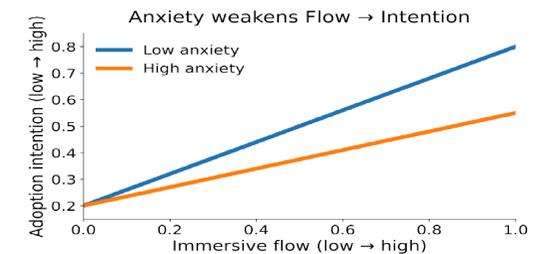Tech. Anxiety −0.29
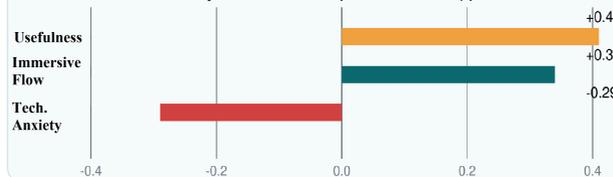
RESULTS AND IMPLICATIONS

Results at a Glance (PLS-SEM)

Social Presence → $\beta=0.46^{***}$ → Immersive Flow
Perceived Usefulness → $\beta=0.39^{***}$
$\beta=0.41^{***}$
R²(adoption) = 0.58
Moderation (−)
$\beta=0.34^{***}$
Technology Anxiety → $\beta=-0.29^{**}$ → Adoption Intention
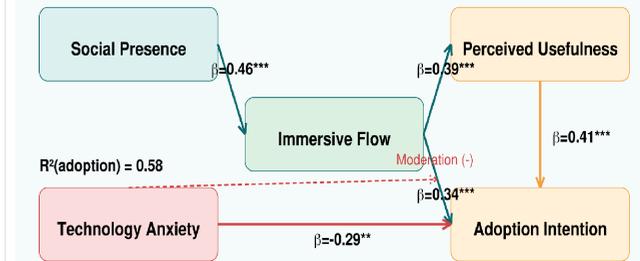
*** p<0.001 ** p<0.01

All the proposed hypotheses were accepted.

Anxiety weakens Flow → Intention
— Low anxiety
— High anxiety

Interpretation & implications
• Managerial: Design presence-rich collaboration (richer avatars, spatial audio, shared tasks) to trigger flow.
• Reduce anxiety through onboarding, training, and user-friendly interfaces.
• Theoretical: Demonstrates affective-cognitive interplay (flow + usefulness) shaping professional adoption.

Keywords: Metaverse adoption; Scenario-based research; Social presence; Immersive flow; Technology anxiety; Chinese professionals

Key References (Selected):
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