

Quest: Journey Through the Lifespan: Gamified Learning for Engagement, Empathy, and Real-World Application

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Abstract: *Quest: Journey Through the Lifespan*, an interactive simulation from McGraw-Hill Education, was integrated into a community college developmental psychology course to examine its impact on engagement, conceptual understanding, and social-emotional learning. Across 14 narrative-based quests, students navigated authentic dilemmas tied to lifespan stages—ranging from infancy and middle childhood to late adulthood—while making choices grounded in psychological theory. A mixed-methods evaluation included quantitative surveys (N = 42) and qualitative thematic analysis of student reflections. Survey results indicated that 88% of participants reported increased engagement, 89% reported strengthened understanding of course concepts, and 92% recognized the game’s relevance to everyday life. Thematic analysis revealed recurring patterns of embodied perspective-taking, empathy-driven decision-making, identity and culture reflection, and practical problem-solving tied to developmental milestones. Students frequently linked in-game scenarios to personal experiences, challenged stereotypes, and proposed real-world solutions to character dilemmas. Findings position *Quest* as a culturally responsive, narrative-rich tool that fosters both academic mastery and critical engagement with human development. Purposeful integration of game-based learning can bridge abstract theory with lived experience, enhancing cognitive, emotional, and social learning outcomes in higher education.

Keywords: Gamified learning, Developmental psychology, Empathy, Student engagement, Serious games, Cultural responsiveness

1. Introduction

Game-based learning has become a central innovation in educational technology, especially in the social sciences where context, empathy, and real-life application matter deeply. In psychology classrooms, simulations, and serious games like *Quest: Journey Through the Lifespan* offer a rare opportunity: to move beyond passive content absorption into applied, emotionally resonant engagement. This paper explores how *Quest* can be used to bridge the gap between theory and real-world understanding of developmental psychology, offering both student outcomes and theoretical rationale for this pedagogical approach.

2. Literature Review

2.1 Gamified Assessments and Competitive Engagement

Game-based elements such as leaderboards, feedback systems, and challenge-based quizzes have been shown to significantly enhance both motivation and learning outcomes. Competitive structures, when paired with timely feedback, sustain student attention and encourage persistence. Nadeem et al. (2023) found that students participating in leaderboard quizzes reported greater sustained attention and motivation. Similarly, Springer STEM (2024) demonstrated that competitive quizzes with instant feedback improved test performance. Hasselmann and Lurkin (2023) confirmed these benefits in engineering courses using an AI-driven board game tournament, showing that competitive collaboration enhanced both engagement and learning outcomes.

2.2 Simulations and Real-World Transfer

Simulations that mirror authentic decision-making environments promote deeper learning and skill transfer across disciplines. Gordillo and López-Fernández (2024) used escape-room style simulations to teach software engineering, finding improved collaboration and retention. Straubinger et al. (2025) reported similar results in computing courses when narrative-driven debugging games were introduced. In the field of special education, Sharma et al. (2024) demonstrated that realistic teaching simulations improved problem-solving skills and motivation among preservice teachers. These findings underscore that simulations grounded in real-world relevance can bridge theory and practice effectively.

2.3 Cognitive, Emotional, and Motivational Gains

Video games and game-based learning environments offer measurable cognitive, emotional, and motivational benefits. A meta-analysis by Bediou et al. (2018) revealed that gameplay can enhance cognitive skills such as memory, attention, and problem-solving. Granic et al. (2014) emphasized the emotional benefits, including improved regulation and empathy, while Hamari et al. (2016) showed that well-designed games foster flow,

intrinsic motivation, and persistence. More recently, Facchino et al., (2025) found that game-based tools in psychology enhance intrinsic motivation and skill acquisition when grounded in authentic, real-world scenarios.

2.4 Narrative, Feedback, and Cultural Context

Narrative immersion, timely feedback, and personal relevance operate together as core drivers of effective gamified instruction. When these elements align, they not only sustain engagement but also promote meaningful learning transfer (Lamb, 2024). Hmoud, Salah, & Altalib, (2024) demonstrated that motivation increased among Jordanian university students when narratives reflected their lived experiences. Comparable results in vocational contexts, as reported by Whitt & Morris (2023) and Facchino, Marchetti, Colasanti, Fontanesi, & Verrocchio, (2025), showed that connecting game scenarios to learners' cultural backgrounds and professional aspirations significantly enhances motivation, relevance, and long-term retention.

2.5 Empirical Foundation for Quest

Meta-analytic findings from NCBI (2023) and MDPI (2023) confirm that serious games in psychology education are most effective when they are contextualized, feedback-rich, and socially embedded. *Quest: Journey Through the Lifespan* aligns with this model by integrating life-span development theory into realistic, character-driven challenges. Its design incorporates immediate feedback, immersive storytelling, and culturally diverse scenarios, providing students with a meaningful bridge between academic concepts and lived experience.

3. Methodology

This study used a mixed methods design to explore how *Quest: Journey Through the Lifespan* supports student engagement, conceptual understanding, and real-world application in a developmental psychology course. Special attention was given to themes of empathy, cultural awareness, and identity development, based on student self-reports and qualitative reflections.

3.1 Participants

Participants were forty-two undergraduate students (ages 18–42) enrolled in an introductory developmental psychology course at a US Community College in Spring and Summer 2025. The classes reflected a diverse student population in terms of age, race, socioeconomic background, and life experience. Participation in the research was voluntary, anonymous, and approved by the college's instructional research review board.

3.2 Intervention

Quest was embedded as a required activity across an eight-week developmental psychology course. Students completed 5 narrative-driven quests in the course, each tied to a stage of the lifespan (e.g., early childhood, adolescence, late adulthood). In-game decision-making allowed students to explore dilemmas related to parenting, career, health, identity, and relationships. Each quest concluded with built-in reflection prompts. Classroom debriefs and structured journaling reinforced connections to course theory and prompted deeper reflection on cultural and social influences.

3.3 Data Collection

Two complementary data sources were collected to triangulate findings and capture both measurable and narrative perspectives.

- **Surveys:** Students completed pre- and post-intervention surveys assessing engagement, perceived relevance, and perceived conceptual understanding. Items were rated on a 5-point Likert scale (e.g., “*Quest* helped me apply psychological theories to real life.”).
- **Reflections:** Students submitted written reflections (150–300 words each) after completing the simulation. Prompts asked about their emotional reactions, decision-making process, and connections to real-life experiences.

Quantitative survey responses were analyzed using descriptive statistics to identify patterns in engagement, conceptual understanding, and perceived real-world relevance. To explore potential variation in student experiences, results were also compared by age group and cultural background.

Survey results indicated overwhelmingly positive perceptions of *Quest: Journey Through the Lifespan*. A large majority (88%) reported that *Quest* increased their engagement in the course, 89% agreed that it strengthened their understanding of developmental psychology concepts, and 92% recognized its relevance to their everyday lives.

These findings align with prior research showing that serious games can enhance executive functioning, emotional regulation, empathy, and motivation—particularly when integrated with reflective prompts and guided discussion (Bediou et al., 2018; Granic et al., 2014; Hamari et al., 2016; McGraw-Hill Education, 2023).

Qualitative data were analyzed through thematic coding. An initial round of open coding identified emerging concepts; a second round grouped these into the following categories:

- **Cognitive integration** (e.g., “It helped me understand Erikson’s theory in a real situation.”)
- **Cross-cultural empathy** (e.g., “It made me think about family roles in different cultures.”)
- **Identity reflection** (e.g., “I related to the character’s struggle with gender norms.”)
- **Real-world application** (e.g., “I’ve actually seen this happen in my own family.”)

Codes were checked for reliability by the instructor and a peer reviewer to reduce bias. Themes were then linked back to course objectives and literature on effective game-based learning.

4. Overarching Themes Across All Quests

4.1 Embodied Perspective-Taking and Personal Connection

Students frequently “inhabited” the character’s perspective and linked in-game experiences to their own histories, family life, or caregiving roles. Rather than engaging in abstract recall, students applied course concepts through concrete, first-person reasoning.

“It didn’t feel like homework... it felt like I was living through the course material.” (Overall Thoughts)

“I asked my parent what I was like at 9 months... I was always on the move, super curious.” (Gabi)

4.2 Conceptual Understanding Through Everyday Anchors

Learners correctly identified age-linked abilities and constraints—such as motor control, object permanence, separation anxiety, and changes in memory or processing speed—and tied these observations directly to course content.

“I had the pharmacy worker read the instructions out loud while Emilio wrote them down... then repeat it.” (Emilio)

“The teen character I played clearly faced an identity vs. role confusion crisis... seeing it play out helped me remember.” (Course Reflection)

4.3 Empathy, Ethics, and Fairness as Decision Drivers

Across quests, moral reasoning played a significant role. Students justified choices in terms of fairness, justice, and social responsibility.

“I chose the assertive dialogue... girls should feel confident standing up for what’s right.” (Abby)

“I told the operator about the boy cheating; nobody likes a cheater.” (Abby)

4.4 Gender, Culture, and Identity Reflection

Students engaged deeply with stereotypes and cultural norms, often challenging assumptions about gender roles and discussing bicultural stressors.

“I had her choose a harder route—not to prove anything, but to show she doesn’t need to limit herself.” (Abby)

“Being Mexican American might expose him to microaggressions... and amplify homesickness because family is everything.” (Martinez)

4.5 Aging, Independence, and Community Scaffolding

Quests involving older adults prompted students to identify practical supports (e.g., carts, label readability, pharmacy clarification) and social resources (e.g., volunteering, rides to church).

“I asked workers to cut up the chicken... and help with the cat food onto the cart.” (Emilio)

“Sensory-friendly hours help seniors shop when it’s quieter.” (Emilio)

4.6 Agency with Supportive Constraint

Students balanced autonomy with wise help-seeking, deciding when to accept assistance and when to persist independently.

"I watched the girl climb first, then tried it—seeing her succeed made me feel confident." (Abby)

"I made sure to pick a normal cart, not a basket, so he could push it instead of carrying." (Emilio)

4.7 Usability and Engagement Value of the Medium

Most students described *Quest* as the "most fun" and "most effective" learning activity of the course, while also noting occasional minor usability issues during initial play.

"The games... were the most effective at making me remember the lesson later on." (Overall Thoughts)

"They took a little troubleshooting at first but were my favorite part." (Overall Thoughts)

5. Game-Specific Highlights

Gabi at Home (Infancy – Sensorimotor Stage)

Students demonstrated strong recognition of sensorimotor behaviors such as crawling, mouthing, banging objects, and peek-a-boo. They accurately connected these observations to object permanence, early communication, and emotional milestones like stranger anxiety. Many drew personal parallels by asking family members about their own infancy.

Abby at the Carnival (Middle Childhood – Gender Roles & Moral Reasoning)

Students frequently identified and resisted gender stereotypes and engaged in principled reasoning when confronting unfair behavior. They navigated tensions between independence and accepting help, reflecting a nuanced understanding of self-efficacy and social support.

Martinez at the Military Base (Young Adulthood – Culture, Identity, and Stress)

Responses highlighted the physical, cognitive, and emotional demands of military life. Students applied a bicultural lens to discuss family obligations, resilience, and potential microaggressions, deepening their appreciation of identity development in early adulthood.

Emilio at the Grocery Store (Late Adulthood – Cognitive/Physical Changes & Social Support)

Students proposed practical strategies to support older adults, from physical accommodations to community initiatives. Social engagement emerged as a recurring protective factor, reinforcing concepts of active aging and socioemotional selectivity.

This thematic and quantitative analysis indicates that *Quest: Journey Through the Lifespan* effectively engages students, strengthens conceptual understanding, and fosters empathy, cultural awareness, and identity reflection—all key goals of the developmental psychology curriculum.

6. Discussion

This study demonstrates that *Quest: Journey Through the Lifespan* exemplifies best practices in game-based learning, including student autonomy, narrative relevance, emotional engagement, and real-world decision-making. By confronting players with developmental dilemmas and requiring them to make meaningful choices, the game bridges abstract psychological concepts with lived experience. This narrative structure allows students to not only recall course content but to actively apply it in context—mirroring findings in the literature that authentic, decision-rich environments promote deeper comprehension and long-term retention (Facchino et al., 2025).

One of *Quest*'s most notable strengths lies in its culturally responsive design. Cross-cultural and gender-relevant scenarios prompted students to engage in nuanced reflection about identity, bias, and personal growth. Many students critiqued stereotypes or shared experiences related to bicultural stressors, suggesting that the simulation served as a safe yet challenging space for exploring issues of equity and diversity. As one student noted, *"Being Mexican American might expose him to microaggressions... and amplify homesickness because family is everything."* By integrating culturally responsive design within a strong narrative framework, *Quest* embodies the very elements that research identifies as essential for bridging course concepts with real-world

understanding. This connection between culturally grounded scenarios and narrative immersion reflects the literature review's discussion of how personal relevance, timely feedback, and cultural context work in tandem to sustain engagement and promote meaningful learning transfer.

Reflection activities embedded throughout the game emerged as a key mechanism for learning. As several responses indicated, the opportunity to pause, process, and articulate their thinking helped students connect in-game experiences to core developmental psychology concepts. Consistent with research on reflective practice, these moments allowed students to bridge the gap between "what is expected" and "what is experienced" (Facchino et al., 2025), reinforcing metacognitive awareness and the ability to transfer learning beyond the classroom.

The findings also highlight the game's role in promoting social-emotional learning. Ethical reasoning, perspective-taking, and care-based decision-making were consistently observed across gameplay responses. Students were not simply memorizing terminology; they were using psychological frameworks to justify choices, evaluate moral dilemmas, and empathize with characters. These outcomes align with the growing recognition that social-emotional competencies are integral to academic success and lifelong learning.

In terms of engagement, *Quest* consistently ranked among students' most enjoyable and memorable course activities. While some noted minor usability challenges, these were more accurately described as small points of navigation or acclimation; brief learning curves that, once overcome, contributed to a sense of accomplishment. Such manageable challenges can enhance motivation, as students experience a balance between skill and difficulty that keeps them invested in the learning process.

6.1 Implications for Teaching with Quest

The analysis suggests several concrete recommendations for educators integrating *Quest* into developmental psychology courses:

- Retain and strengthen the reflection prompts, as these are central to linking gameplay with learning outcomes.
- Make equity, identity, and stereotype-challenging elements explicit in discussion and assessment.
- Scaffold strategies for adaptive self-regulation, such as "wise help-seeking," within the game context.
- Provide brief onboarding guidance to reduce initial usability barriers.

6.2 Limitations and Future Directions

While these results are promising, they reflect data from a single course and instructor, which limits generalizability. Future research should compare *Quest*-based sections with non-*Quest* sections, incorporate structured assessment rubrics, and examine subgroup differences in engagement and learning outcomes. Additionally, exploring *Quest*'s adaptability for other psychology subfields or related disciplines could expand its impact.

6.3 Gamified Learning as a Catalyst for Student Success

Ultimately, *Quest* illustrates how well-designed gamified learning experiences can move students beyond passive content absorption toward applied, empathetic reasoning. By integrating narrative, choice, cultural relevance, and reflection, the game creates a dynamic environment where students can *live* the concepts they study. As digital education continues to evolve, such approaches hold significant promise for cultivating not only content mastery but also the critical, reflective, and socially aware thinking that defines successful global citizens.

Ethics Statement: This study involved anonymous, voluntary student reflection data collected during a for-credit psychology course. No identifying information was gathered. Institutional permission was obtained in accordance with the US Community College's internal review policies.

AI Statement: An AI-based writing assistant was used for grammar, clarity, and tone refinement; all ideas, analysis, and conclusions are solely those of the author.

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