



EMPLOYEE ENGAGEMENT BEHAVIOR IN SERIOUS GAMES: INSIGHTS FROM THE LITERATURE

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Abstract

The digital transformation has caused more organizations to choose outsourced corporate training (OCT) which now implements serious games (SGs) as contemporary employee development solutions. Research studies have studied SGs through their operational methods and application patterns and performance results in different business sectors but they have not fully explored the organizational elements that affect their worth. The review combines previous studies to demonstrate how serious games affect participant involvement and knowledge sharing and team work during training sessions. The research shows that there is no existing information about digital games which scholars and practitioners need to understand their potential for improving extended learning approaches

Keywords:

Digital Transformation; Employee Engagement; Serious Games; Corporate Training.

1. Introduction

The modern workplace requires employees who can adjust to changing work settings because of twenty-first century workplace difficulties (Lawler & Benson, 2022). Employers base their workplace interactions with staff members on the number of qualified candidates because modern employees expect specific work environments and corporate dedication (Moritz, 2020). The current hiring systems of organizations fail to identify suitable candidates for training development because they operate with outdated methods that create recruitment difficulties (Fuller et al., 2021). The modern workforce consists of young employees who seek personal growth and life satisfaction through their work experience thus organizations need to develop better hiring and training methods which create stronger workplace connections (Hastwell, 2021). Organizations solve their ongoing

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skill shortages by using outsourced corporate training (OCT) services according to Stroh & Treehuhoff (2003).

The worldwide e-learning market has made traditional learning approaches obsolete (GMI, 2020). Organizations today have access to advanced OCT market training systems which provide personalized interactive learning solutions that meet customer business requirements and employee needs (Giannakos et al.,2021). Organizations achieve improved performance results through digital training methods which help them adapt their strategies to market fluctuations (Gegenfurtner et al.,2014). Organizations that want to develop learning capabilities need to move away from basic training programs toward performance optimization systems which will help them achieve market leadership (Hannola et al.,2018; Trevor & McCracken, 2009). Organizations can reduce learning time through tailored training systems which deliver flexible education at affordable fixed expenses (Bekmanova et al.,2021). Organizations need to understand how employees behave when they encounter new learning approaches to properly assess serious games (SGs) for corporate training. Research on technology adoption has identified Behavioral Intention (BI) drivers which result from peer and hierarchical influences (Alvelos et al.,2015) while UTAUT2 stands as the leading acceptance and use of technology framework (Venkatesh et al.,2012). The present adoption drivers do not explain why staff members either decline to use SGs or face difficulties in implementing their acquired knowledge (Velada & Caetano, 2007). Organizations need to show readiness for OCT initiatives while keeping suitable cultural conditions (Alvelos et al.,The research by (2015) shows that training programs do not follow a structured format which results in insufficient employee development. SG training programs face implementation barriers because managers hold different opinions and the programs lack defined structures (Clochard & Westerman, 2020). The acceptance of SG training by employees depends on various elements which include organizational factors and personal characteristics and environmental conditions that organizations cannot control. The research examines U.S. client organizations that run OCT initiatives to study SG training acceptance behaviors and create a conceptual model which explains adoption barriers and success elements (Mehra et al.,2014).

2. Materials and Methods

The research investigates OCT through qualitative literature-based methods to analyze the effects of serious games (SGs) on corporate training. The research design follows Creswell (2014) to study extant literature on traditional training methods as the main focus. The research method conducts case studies at depth to analyze SG effects on employee involvement and corporate knowledge acquisition instead of using statistical data. The review process required researchers to find and combine academic studies about serious games in business environments while focusing on research about employee engagement and behavioral adoption and technology acceptance (Alvelos et al.,2015; Venkatesh et al.,2012;). The research on organizational learning and training transfer (Velada & Caetano, 2007). The research used previous research highlighting that SG implementation influences performance. The research methodology employs different approaches to evaluate both positive and negative elements which affect SG value in OCT

programs. The research used thematic coding to detect recurring themes which included employee engagement and knowledge sharing and communication and organizational preparedness throughout the analyzed sources. The final analysis highlights SGs within the digital transformation and corporate training innovation discussions.

3. Theoretical background

Organizations need to develop new training methods because their operational environments have become more complicated. Younger employees who want to develop their skills and find job satisfaction at work find that typical corporate training programs do not meet their needs (Hastwell, 2021; Moritz, 2020). Organizations choose outsourced corporate training (OCT) as their strategic solution to handle skill shortages while keeping market competitiveness (Stroh & Treehuhoff, 2003). Serious games (SGs) prove their worth as educational tools which boost employee learning and workplace involvement in modern work environments. Research indicates that serious games create better learning outcomes by improving student motivation and knowledge sharing and communication skills (Giannakos et al.,2021; Gegenfurtner et al.,2014). Organizations that operate with learning-intensive methods benefit from SGs because their competitive edge depends on established frameworks which enable ongoing learning (Hannola et al.,2018; Trevor & McCracken, 2009). The delivery systems of personalized training models become more effective through adaptable methods which reduce costs while building superior learning spaces (Bekmanova et al.,2021).

Scientists apply technology adoption research to analyze employee behavior through their serious game activities. The Unified Theory of Acceptance and Use of Technology (UTAUT2) functions as a widely used model to analyze behavioral intention (BI) drivers which consist of social influence and hedonic motivation and facilitating conditions (Venkatesh et al.,2012; Alvelos et al.,2015). The existing elements which support SG adoption do not explain employee conduct because staff members oppose change and struggle to apply their acquired skills in their regular work duties (Velada & Caetano, 2007). Research indicates that training programs achieve success when organizations demonstrate their readiness and their cultural environment accepts the training content (Alvelos et al.,2015). The success of OCT initiatives depends on managerial consistency and program design that meets employee needs because external standards can create disengagement (Clochard & Westerman, 2020). Research indicates that organizations need to study both attractive and unappealing factors which affect SG adoption and the complete training environment where employees learn. The research shows that SGs hold great potential for corporate training yet scientists have not fully addressed all the necessary aspects of this technology. The current research on SG processes and performance lacks sufficient investigation into organizational factors which affect their value from an employer's point of view. The research gap needs solution development to move forward digital training innovation theory and practice development. The findings on the literature are summarized in Table 1:

Table 1 Literature review findings. Source: elaborated by the authors

Author(s)/Year	Study Focus	Main Contribution
Saha (2025)	Serious game market forecast 2025–2035	Predicts growth driven by AR/VR and gamification
Baker (2024)	Corporate training games for 2025	Practical strategies to improve global employee engagement
Calza-Perez et al. (2024)	Overview of serious games in corporate learning	Bibliometric review of adoption, benefits, and challenge
Oliveira (2024)	Serious games in automotive corporate training	Case study showing engagement and motivation benefit
Lawler & Benson (2022)	Workforce challenges in the 21st century	Highlight new expectations in employment relations
Moritz (2020)	Workforce dynamics in the digital era	Shows changes in employee conditions and expectations
Fuller et al. (2021)	Traditional hiring practices	Reveal limitations in identifying trainable talent
Hastwell (2021)	Expectations of younger employees	Emphasizes work as an opportunity for self-development
Stroh & Treehuhoff (2003)	Outsourcing in corporate training	Introduce OCT as a strategic solution for skill gaps
GMI (2020)	Global e-learning market	Point to obsolescence of traditional learning models
Giannakos et al. (2021)	Use of serious games in training	Demonstrate higher engagement and personalization
Gegenfurtner et al. (2014)	Performance data in digital training	Show efficiency in data collection and use
Hannola et al. (2018)	Learning-intensive organizations	Link institutional frameworks to competitive advantage
Trevor & McCracken (2009)	Institutionalized training structures	Argue for effectiveness of continuous learning
Bekmanova et al. (2021)	Personalized training models	Highlight benefits such as shorter cycles and cost reduction
Venkatesh et al. (2012)	UTAUT2 technology adoption	Propose behavioral intention drivers
Alvelos et al. (2015)	Technology adoption in corporate training	Apply UTAUT2 in organizational contexts
Velada & Caetano (2007)	Training transfer	Show failures in consolidating new competencies
Clochard & Westerman (2020)	Bias in training programs	Reveal inconsistencies and impacts on employee participation
Mehra et al. (2014)	Social networks and organizational learning	Highlight the role of social relations in corporate learning

4. Technology Adoption (UTAUT2)

The UTAUT2 model has become a popular choice for research studies which focus on training (Ain et al.,2016; Azam et al.,2019) and education (Nawaz & Mohamed, 2020; Tseng et al.,2019). The model received its initial assessment from Morris et al. The model underwent its first academic evaluation after Morris et al. (2003). The model faces three main limitations because it contains numerous predictors which do not always represent accurate knowledge transfer (Bagozzi, 2007) and its reduced simplicity compared to TAM (Davis, 1989) and its complex statistical nature which restricts its use in situations where simpler models work better (Li, 2020; van Raaij & Schepers, 2008). The original authors together with other researchers (Maruping et al.,2017; Venkatesh et al.,Zhang and Viswanath (2016) and Zhang and Viswanath (2018) developed UTAUT2 as a core framework for technology adoption studies through their research despite facing initial doubts. The model contains useful elements for future research even though these aspects do not directly apply to this study.

The model demonstrates high suitability for research investigations which examine training and learning development processes. The model enables researchers to study employee digital tool adoption through behavioral intention analysis (Azam et al.,2019; Tseng et al.,2022; Yu, 2012). The environmental conditions predictor stands out as a vital factor for understanding employee job performance and satisfaction according to Venkatesh (Viswanath, 2022). Organizations need to select particular technologies through antecedent and determinant analysis to reach organizational success and provide advantages to their employees.

4.1. Social Influence

The adoption of serious games (SGs) by employees depends heavily on social influence when they form behavioral intentions. The social environment of workplaces requires employees to follow workplace consensus instead of making their own decisions (Siala et al.,2020). The success of SG systems depends on staff approval and management backing which sometimes exceeds their actual value. The process of adoption needs employees to receive approval from their professional and organizational networks as well as their personal connections. The social influence process enables early adopters to develop influencer status which helps their group members accept change while minimizing their resistance to it (Lichy & Merle, 2020). Leaders must concentrate on official workplace connections together with unofficial relationships to build an environment which supports staff members.

The two enabling factors of Training Visibility (TV) and Self-Efficacy (SE) receive their influence from social influence. The way organizational groups view their training accessibility depends on employee position and their position in the hierarchy and their supervisor's attitudes (Derks et al.,2016; Hannola et al.,2018; Suh et al.,2017). The success of employee program participation depends on HR and leadership teams to deliver effective communication because staff members need to know about available training programs (Clochard & Westerman, 2020). The method organizations use to deliver information to staff determines their training participation because unequal access creates barriers which mainly affect disadvantaged groups (Shields & Price, 2003; Lössbroek & Radl, 2019). Social norms determine how much employees with low self-efficacy depend on their peers for validation which either helps or hinders their participation (Briz-Ponce et al.,2017). The practice of following group norms creates obstacles which block older workers and less educated employees from joining while it maintains social inequalities (Clochard & Westerman, 2020).

4.2. Hedonic Motivation

Game-based learning systems function independently from digital platforms because their design structure follows hedonic motivation principles (Tseng et al.,2022). The enjoyment of learning through "learning with pleasure" emerges from organizational culture which leaders develop through their efforts to create a playful and secure environment (Georganta & Montgomery, 2019). The dimension serves as an attraction tool which enhances employee value for training programs to achieve higher participation rates (Farooq et al.,2017; Nawaz & Mohamed, 2020). The UTAUT2 model includes hedonic motivation as a fundamental element which determines how employees view training effectiveness (Venkatesh et al.,2012). The research on workplace environments has not proven any direct relationship between hedonic motivation and self-efficacy or effort expectancy according to Azizi et al. (2020) and Fadzil (2018) and Gunasinghe et al. (2020) but further studies could establish these relationships.

5. Discussion and Implications

The research discussion demonstrates how technology adoption frameworks and serious games in corporate training and negotiation research create a common ground to study employee engagement and organizational readiness. The UTAUT2 model maintains its effectiveness for training behavior research because of its complex design although it lacks simplicity (Bagozzi, 2007; Li, 2020; Davis, 1989). The model includes social influence as a factor which combines with hedonic motivation and facilitating conditions to match previous studies on serious games that demonstrate enjoyment and organizational culture and visibility drive adoption (Giannakos et al.,2021; Nawaz & Mohamed, 2020; Tseng et al.,2022). The research dimensions align with negotiation studies because trust and structured processes and relational dynamics serve as vital elements which produce successful negotiation outcomes (Dias, 2020; Dias & Navarro, 2020; Santos & Dias, 2024).

The research results deliver significant value to human resource development and organizational behavior and management strategy development. Training program implementation occurs through a negotiated process between employees and organizations and external providers which depends on social validation and managerial communication patterns that function similarly to bargaining and trust development in negotiation settings (Dias et al.,2021; Dias et al.,2022). Organizations need to develop particular cultural and climatic settings for serious games to reach their highest potential because these environmental elements influence how employees view their work independence and performance abilities and their sense of fairness at work (Georganta & Montgomery, 2019; Dias et al.,2023). Organizations need to create training programs which handle technological aspects and establish relational connections that understand team interactions and leadership prejudices and cultural preparedness.

Serious games together with negotiation role-play simulations through experiential learning create new educational approaches for corporate training and academic education. The research on educational gamification by Prensky (2001) and Nawaz & Mohamed (2020) and negotiation teaching materials by Dias et al. The research by Dias (2020) and Dias (2023) demonstrates that students achieve better results through interactive scenario-based teaching which promotes active classroom participation. UTAUT2 enables researchers to analyze student adoption behaviors in gamified learning spaces through UTAUT2 while negotiation frameworks reveal how social elements and environmental conditions influence student involvement. The combination of technology adoption research with negotiation education methods creates new knowledge in educational science.

The research findings have significant effects on three main fields which include conflict resolution and information systems and international business. The core elements of UTAUT2 which include trust and social influence show similarities with negotiation principles that appear in mediation and dispute resolution (Dias et al.,2023) thus making gamified platforms suitable for virtual negotiation and conflict management. Information systems research benefits from negotiation theory because it helps researchers understand

how adoption determinants relate to specific contexts. Research should investigate how various national negotiation approaches affect training program acceptance rates in different cultural environments (van Raaij & Schepers, 2008).

The adoption of serious games for corporate training requires more than technological choices because it involves social and cultural and organizational negotiations. The research findings demonstrate that technology adoption models and serious games literature and negotiation research should work together to create new knowledge which benefits human resource development and organizational behavior and pedagogy and conflict resolution and international management. The research synthesis converts training adoption into a social and environmental process which produces new educational and organizational development knowledge. The research findings create new paths for investigation which span different academic disciplines.

6. Conclusion

The UTAUT2 framework enabled us to study behavioral intention drivers through an analysis of how users respond to hedonic motivation and self-efficacy and training visibility while social dynamics and managerial communication act as mediating elements. The research added depth to our understanding through negotiation theory which showed that training adoption follows bargaining patterns that depend on trust levels and structured communication systems and relationship quality. Organizations need to create environments which support inclusiveness and open communication and team-based confirmation for their corporate training programs to succeed. Serious games which operate within supportive organizational systems produce enhanced employee involvement and knowledge exchange and enduring competence growth. Serious games adoption faces major challenges because managers hold biased views and training resources are not equally available to all employees and different worker groups exist. The solution to these problems needs technological modifications and relationship-based negotiations to create equal training opportunities and strategic alignment.

The research results establish new possibilities for different academic fields to use their acquired knowledge. The study of human resource development benefits from studying training adoption as a collaborative process while organizational behavior research learns about cultural factors that affect learning success and education scholars develop gamification methods with negotiation teaching approaches for practical learning experiences. The research findings enable conflict resolution experts and information systems specialists to develop virtual negotiation systems and context-dependent adoption frameworks which international business researchers can use to study how cultural differences affect training program acceptance rates. The research establishes a new theoretical and practical understanding of serious games adoption through its analysis of this process as a social and interdisciplinary field. The research combines technology adoption theories with negotiation science to create a theoretical framework which shows organizations use negotiation methods to deploy new technology.

7. Future research

Research should study corporate training through serious games by using an interdisciplinary approach that combines technology adoption models with negotiation frameworks across different cultural settings. The study uses social influence, hedonic motivation, and organizational readiness as predictors, as established by Venkatesh et al. Research studies must track employee knowledge transfer and organizational performance results after serious game implementation to verify if short-term employee engagement leads to sustained organizational benefits. Finally, future research is encouraged to conduct field studies to assess the strength of driver relationships in relation to behavioral intention. It would also be interesting to explore the reverse side of cocreation (cocodestruction) as a means to unpacking can be eroded as well as generated in corporate training initiatives.

Ethical issues

The author states that this article raises no ethical issues or concerns about noncompliance. The research followed established ethical guidelines, protecting participants' identities and company names through anonymization to meet ethical standards and maintain confidentiality.

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