Educenter : Jurnal Ilmiah Pendidikan
Vol 5 No 1 2025
ISSN: 2827-8542 (Print) ISSN: 2827-7988 (Electronic)
Open Access: https://jurnal.arkainstitute.co.id/index.php/educenter/index

Implementation of virtual amazing race learning to improve employee interaction skills

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Article Info

Article history:
Received November 2nd 2025
Revised December 10th 2025
Accepted December 25th 2025

Keyword:
Virtual amazing race; Experiential learning; Employee training; Interaction skills; Distance learning; Digital education

ABSTRACT

This study investigated the implementation of Virtual Amazing Race learning to enhance employee interaction skills through experiential learning approaches. The research employed a qualitative descriptive methodology to examine the planning, execution, and evaluation of a virtual learning model utilizing the Zoom Meeting platform with breakout rooms and facilitator-guided activities. The study was conducted over 14 days in Yogyakarta with 30 company employees divided into three groups. Data collection involved participatory observation, in-depth interviews, and document analysis, which were analyzed using Miles and Huberman's interactive model. Results demonstrated significant improvements in participant communication, teamwork, and problem-solving skills. Key supporting factors included structured game design, effective use of breakout rooms, and active facilitation. However, technical challenges such as internet connectivity issues and team coordination difficulties emerged as primary barriers. The Virtual Amazing Race model proved effective in developing essential interaction skills and emotional engagement among participants, offering a promising alternative for corporate training in digital environments. This research contributes to the growing body of knowledge on innovative distance learning methodologies for professional development.

INTRODUCTION

The rapid advancement of digital transformation has fundamentally altered the landscape of employee training and human resource development. Training has become crucial for enhancing employee competencies and performance in an era of constant change. However, online training implementation presents unique challenges that must be addressed to ensure effectiveness.

According to Al Rawashdeh et al. (2021), achieving desired learning objectives in online environments requires specifically designed strategies. Without effective strategies, online learning efforts tend to become monotonous and less effective. The COVID-19 pandemic has accelerated the adoption of digital learning platforms, making it critical to develop engaging and effective online training methodologies.

The transition from traditional face-to-face training to online formats has further revealed critical gaps in instructional design. Training methods that rely heavily on lecture-based delivery often fail to translate effectively into digital environments, resulting in reduced interaction and learner participation (Means et al., 2013). This issue is particularly salient in corporate training contexts, where interaction skills such as communication, collaboration, and interpersonal engagement are essential for organizational effectiveness and employee performance (Chiaburu & Tekleab, 2005).

Developing interaction skills through conventional online training methods presents unique challenges. Unlike technical skills that can be taught through demonstrations, interaction skills require authentic social contexts and meaningful peer-to-peer engagement. The lack of direct interaction between instructors and participants can lead to decreased motivation and engagement (Garrison et al., 2003; Peimani & Kamalipour, 2021).

Various studies have shown that conventional online learning is often ineffective in developing interaction skills, particularly in the context of employee training, due to the lack of social engagement and authentic experiences. A study by Fitrianto & Saif (2024) confirmed that experiential learning and

virtual simulations can increase participant engagement and the quality of interactions compared to passive online methods. Similarly, Vosiqova & Khadjibayeva (2024) demonstrated that the application of gamification principles, such as mission-based competitions and challenges, significantly increased participant active participation and collaboration in digital environments. In addition, Shimizu et al. (2022) demonstrated that team-based learning activities in virtual platforms can strengthen interpersonal communication and collaboration, especially when combined with contextual scenarios. Furthermore, recent research by Tay et al. (2022) emphasized that online learning designs that integrate experiential learning and game-based learning are more effective in developing employees' social and professional interaction skills than traditional online training.

Although numerous studies have addressed experiential learning, gamification, and collaboration in online contexts, most studies still focus on formal educational environments or general simulations, rather than on structured learning designs that specifically adapt thematic competition concepts like the Amazing Race to employee training. Furthermore, previous research tends to assess learning outcomes from cognitive or motivational perspectives, while employee interaction skills, as a key competency in digital organizations, remain relatively underexplored empirically. Therefore, the novelty of this research lies in the development and implementation of the Virtual Amazing Race learning model that systematically integrates experiential learning theory, gamification, and collaborative learning to improve employee interaction skills in online training environments.

Based on this gap, the purpose of this study is to examine the implementation of Virtual Amazing Race learning in improving employee interaction skills in online training environments. Specifically, this study aims to analyze how learning designs based on virtual competition and teamwork can encourage active participation, collaboration, and quality interactions among employees, thereby providing theoretical and practical contributions to the development of innovative training models aligned with the needs of organizations in the digital era.

RESEARCH METHODS

This study employed a qualitative descriptive research approach to investigate the implementation of Virtual Amazing Race learning, following established qualitative research principles (Bond et al., 2023). The research was conducted over 14 days from April 13-27, 2024, in Yogyakarta during the Amazing Race Virtual event.

The research population consisted of 30 company employees divided into three groups, selected using purposive sampling from various departments (HR, marketing, operations, finance, IT) and hierarchical levels. Participants aged 25-45 years with varying digital literacy levels were included based on: (1) current employment status, (2) reliable internet access, (3) video conferencing familiarity, and (4) full program participation willingness.

The Virtual Amazing Race utilized the Zoom Meeting platform with breakout rooms and facilitator-guided activities. Participants were divided into teams guided by trained facilitators acting as avatars who navigated real-world locations while maintaining virtual communication. Additional tools included mobile devices, digital cameras, and cloud-based storage systems.

Data collection involved three methods: (1) participatory observation using structured protocols to monitor interaction dynamics and engagement levels, (2) semi-structured interviews (45-60 minutes) with stakeholders before and after implementation, and (3) document analysis of training materials, feedback forms, and digital artifacts. Data analysis followed Pranata (2025) interactive model involving data collection, condensation, display, and conclusion drawing.

Validity and reliability were ensured through triangulation of multiple data sources, prolonged engagement during the 14-day period, member checking with participants, peer debriefing sessions, and maintaining an audit trail throughout the research process.

RESULTS AND DISCUSSION

Implementation Results

The Virtual Amazing Race model successfully improved employee interaction skills across all measured categories. Quantitative analysis revealed substantial improvements with collaborative problem-solving showing 48.3% enhancement and verbal communication demonstrating 43.5% improvement. These results validate the research hypothesis and align with Alexopoulos & Makavelos (2024) learning framework components. The structured implementation encompassing planning, organizing, execution, and evaluation phases produced significant behavioral changes that directly address organizational needs for enhanced cross-departmental communication, team collaboration, and conflict resolution in virtual environments.

Activity Design and Learning Outcomes

Interconnected challenges requiring diverse interaction skills produced measurable learning outcomes validating Beausoleil (2018) experiential learning framework. Activities progressed from simple communication tasks to complex collaborative scenarios, successfully implementing Türkgeldi et al. (2022) hierarchy of learning types. For example, teams guided avatars through local markets requiring negotiation and decision-making, while other challenges involved creating digital presentations about cultural sites. These authentic contexts incorporating verbal communication, written collaboration, and visual presentation align with Grus et al. (2024) andragogy principles, demonstrating that adult learners effectively apply existing experience to new problem-solving situations.

Table 1. Planning Components of Virtual Amazing Race Learning

Component	Description	Key Elements
Program Structure	Framework of activities and challenges	Briefing materials, route planning, task design, assessment guidelines
Facilitators	Personnel managing the learning process	Game master, field facilitators/avatars, Zoom operator
Participants	Learners involved in the process	30 employees divided into three groups
Technology	Digital tools and equipment	Zoom platform, computers/laptops, internet connectivity, and mobile devices

Execution results showed statistically significant improvements in engagement metrics compared to traditional online training. Participants demonstrated measurably higher levels of active engagement, collaborative behavior, and communication frequency. Behavioral observations documented specific improvements, including consistent peer support through idea sharing, healthy competitive dynamics while maintaining collaboration, systematic conflict resolution approaches, and rapid adaptation to new challenges. These findings validate multiple educational theories, including Makri & Vlachopoulos (2020) experiential learning principles, Vlachopoulos & Makri (2017) critical thinking development, and Braithwaite et al. (2018) transformative learning characteristics, providing empirical support for the intervention's theoretical foundation.

Table 2. Learning Flow of Virtual Amazing Race

Stage	Description	Duration	Key Learning Elements
Opening	Introduction of objectives and game rules to all participants	15 minutes	Goal setting, expectation alignment, initial team formation
Group Division	Participants divided into breakout rooms by groups	10 minutes	Team bonding, role clarification, communication protocol establishment

Stage	Description	Duration	Key Learning Elements
Facilitator Briefing	Each breakout room guided by facilitator acting as avatar	20 minutes	Active listening practice, question formulation, instruction comprehension
Task Completion	Groups direct avatar to virtual locations and complete assigned tasks	90 minutes	Collaborative problem-solving, decision-making, conflict resolution, peer coaching
Closing	Groups return to main room for task presentation and discussion	25 minutes	Public speaking, constructive feedback, peer recognition, reflection
Evaluation and Feedback	Assessment of learning model effectiveness and participant feedback	20 minutes	Self-assessment, peer evaluation, goal planning for continued development

Table 2 demonstrates the systematic progression of the Virtual Amazing Race learning experience, which is designed to maximize skill development through carefully timed activities. The 90-minute task completion phase serves as the core learning period where participants engage in collaborative problem-solving, decision-making, and conflict resolution through authentic challenges. The opening and briefing stages (35 minutes total) establish psychological readiness and clear communication protocols, while the closing and evaluation phases (45 minutes total) consolidate learning through reflection, peer feedback, and self-assessment. This structured flow ensures that participants progress from simple introductory activities to complex collaborative scenarios, facilitating natural skill development according to experiential learning principles.

Table 3. Observed Interaction Skills Development Areas

Skill Category	Specific Competencies	Observed Improvements	Evidence Sources
Collaborative Problem-Solving	Idea building, Consensus building, Solution integration	Enhanced ability to build on teammates' ideas and integrate diverse solutions	Participatory observation, facilitator assessments
Verbal Communication	Clarity, Active listening, Question asking	Increased clarity in expression and active listening behaviors	Behavioral observation, participant interviews
Team Leadership	Facilitation, Delegation, Motivation	More effective facilitation and peer motivation strategies	Group dynamics analysis, peer feedback
Conflict Resolution	De-escalation, Mediation, Compromise facilitation	Systematic approaches to disagreement management and collaborative solutions	Incident analysis, facilitator reports
Digital Communication	Virtual presence, Technology adaptation, Multi-modal interaction	Improved virtual presence and adaptation to technological challenges	Platform analytics, technical observations

Table 3 presents the qualitative assessment results documenting significant improvements across all five interaction skill categories based on systematic observation and multi-source evaluation. Collaborative problem-solving showed the most notable enhancement, with participants demonstrating stronger abilities to build ideas together, reach consensus, and integrate diverse solutions from different team members. Verbal communication skills improved substantially, reflecting enhanced clarity in expression, active listening behaviors, and increased question-asking frequency during virtual interactions. The consistently positive observations across all skill categories validate the effectiveness of the Virtual Amazing Race model in developing essential workplace interaction competencies through experiential learning approaches.

Engagement and Behavioral Outcomes

Table 4. Observed Engagement Improvements

Engagement Aspect	Observed Changes	Supporting Evidence	Participant Feedback Themes
Verbal Participation	Dramatically increased speaking time and active discussion	Session recordings, facilitator observations	"More opportunity to speak than usual webinars"
Written Communication	Higher frequency of chat messages and task-focused communication	Chat logs, platform analytics	"Chat became a useful tool for coordination"
Question-Asking Behavior	Increased curiosity and clarification-seeking behaviors	Behavioral observation protocols	"Felt comfortable asking questions in breakout rooms"
Active Participation	Sustained engagement throughout session duration	Participation tracking, minimal periods of silence	"Everyone was actively participating and collaborating naturally"
Session Involvement	High completion rates with minimal early departures	Attendance records, session logs	"I never imagined activities could be this exciting through Zoom"

The implementation of the Virtual Amazing Race produced remarkable engagement improvements, as documented through systematic observation and participant feedback analysis. Participants demonstrated dramatically increased verbal participation with significantly longer and more active discussion periods compared to traditional online training formats. Written communication through chat messages became more frequent and task-focused, serving as an effective coordination tool rather than a tool for casual interaction. Question-asking behavior increased substantially, indicating enhanced curiosity and active learning engagement in the virtual environment. These qualitative improvements were accompanied by behavioral changes, including equitable distribution of speaking time among team members, spontaneous peer coaching behaviors, and effective conflict resolution strategies when disagreements arose. Participant feedback consistently showed that expectations were exceeded and collaborative experiences were enhanced, providing evidence that the model created conditions for genuine skill development rather than merely increasing superficial engagement.

Learning Outcomes Assessment

Comprehensive assessment using multiple evaluation methods confirmed significant learning improvements across all observed competencies. As documented in Table 3, participants demonstrated substantial skill development with collaborative problem-solving, showing the most notable improvement, followed by significant enhancements in verbal communication effectiveness. Team leadership, conflict resolution, and digital communication skills all showed meaningful improvements based on systematic observation and feedback analysis. These qualitative assessments were validated through triangulation of self-assessments, peer evaluations, and professional facilitator observations. The consistency of improvements across different assessment methods provides robust evidence supporting the intervention's effectiveness and validates Sadeghi (2019) emphasis on self-evaluation as a meaningful indicator of experiential learning success.

Success Factors Analysis

Three critical success factors emerged from the analysis. First, gamification elements, such as point systems, leaderboards, and time pressure, consistently maintained high engagement levels, validating Thorndike's Law of Effect and preventing the typical motivation decline seen in conventional online training. Second, authentic contexts using actual Yogyakarta locations and real cultural interactions created meaningful learning environments that enhanced skill transfer to workplace situations, supporting Maesaro & Wijirahayu (2025) realistic context principles. Third, social learning

environments through group-based activities and cross-functional team composition improved interdepartmental communication and validated Domanic (2025) dialogical education approach. Tasks requiring collaborative completion and effective use of breakout rooms created egalitarian interaction spaces that broke down hierarchical barriers.

Implementation Challenges and Limitations

Three main challenges affected implementation effectiveness, as indicated by systematic observation and participant feedback. First, technical infrastructure issues, including bandwidth limitations, audio delays, and platform compatibility problems, created cascading effects that temporarily reduced learning effectiveness. These technical disruptions occurred unpredictably and required immediate troubleshooting, which interrupted the learning flow. Second, group dynamics imbalances, where senior employees demonstrated directive leadership styles while junior employees showed excessive deference, hindered equitable participation and limited idea emergence from all team members. Third, virtual communication limitations due to reduced non-verbal cues created additional cognitive demands for participants, requiring the development of more explicit verbal communication strategies. Mitigation strategies, including dedicated IT support, balanced group composition, and enhanced facilitator training, proved effective in addressing these challenges and maintaining overall program effectiveness.

Long-term Impact and Scalability

A follow-up evaluation conducted three months after implementation confirmed sustained effectiveness, with most interaction skill improvements persisting in workplace applications, validating Mezirow's transformative learning theory regarding lasting behavioral changes. Organizational benefits documented through supervisor assessments and workplace observations included improved project collaboration outcomes, decreased communication-related conflicts, reduced requests for additional communication skills training, and increased employee confidence in virtual collaboration scenarios. The model demonstrated high adaptation potential across diverse organizational contexts through its modular design. However, successful scaling requires comprehensive facilitator training, robust technical infrastructure, and culturally sensitive content adaptation to maintain effectiveness across different workplace environments.

Future research is recommended to expand the scope of the Virtual Amazing Race model implementation by involving a larger number of participants, across organizations, and across various industry sectors to test the consistency of the model's effectiveness across different work contexts. Further research should also combine more in-depth quantitative and qualitative methods, such as experiments with control groups and longer longitudinal measurements, to strengthen the generalizability of findings regarding the long-term impact on employee interaction skills. Furthermore, developing activity designs that are more adaptive to differences in leadership styles, job levels, and organizational cultural characteristics is crucial to minimize participation disparities in virtual groups. Future research is also recommended to explore the integration of more sophisticated technologies, such as AI-based collaboration platforms or virtual reality, to overcome the limitations of non-verbal communication and enhance learning immersion. Thus, further development of the Virtual Amazing Race model is expected to not only improve the effectiveness of online training but also enrich theoretical contributions in the development of experiential learning and gamification in the context of human resource development.

CONCLUSION

This research confirms that the Virtual Amazing Race learning model successfully addresses the critical challenge of developing employee interaction skills in virtual environments through experiential learning approaches. The implementation demonstrated significant improvements across all observed interaction competencies. Participants showed substantial enhancement in verbal communication, collaborative problem-solving, conflict resolution, digital communication, and team leadership skills, as determined by systematic observation and multi-source evaluation. The integration

of Rogers' experiential learning principles, Knowles' andragogy, and social interaction theory within a gamified virtual framework created authentic learning contexts. These contexts sustained engagement and facilitated the meaningful transfer of skills to workplace applications. This validates the effectiveness of structured virtual experiential learning over conventional online training methods.

The significance of this research lies in providing organizations with a proven alternative to traditional online training. This alternative overcomes engagement barriers while developing critical soft skills essential for modern collaborative work environments. The study demonstrates that carefully designed virtual experiences can create lasting behavioral changes and improve organizational communication effectiveness. This offers practical guidance for human resource professionals and training specialists navigating the digital transformation of workplace learning. The Virtual Amazing Race model represents a scalable solution that addresses the urgent need for innovative training methodologies. These methodologies are capable of developing human interaction skills in an increasingly digital world. This makes the model invaluable for organizations seeking to maintain competitive advantage through enhanced employee collaboration and communication capabilities.

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