

Enhancing Employee engagement in Occupational Health and Safety Corporate Training via KAHOOT gamified Learning Tool

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1. Research Introduction:

In recent years, instructors have been confronting a technological training revolution driven by the use of digital technology to deliver instruction (Clark & Mayer, 2008). “The value of games as a vehicle for teaching concepts while inspiring students is now well accepted at almost all levels of education” (Becker, 2001, p. 23).

Occupational Health and Safety (OHS) training remains an important pillar in maintaining workplace safety and reducing occupational accidents across industries. As a port and terminal safety supervisor and full-time corporate occupational health and safety trainer, effective training strategies for developing a culture of safety among white and blue-collar workers are critical in today’s workplace internal improvements and employee prioritization of internal wellness. Given this perennial need, this research begins exploring the use of KAHOOT gamified Learning Tools to improve employee engagement in workplace health and safety corporate training.

The historical development of occupational safety models informs the background of this research. Traditionally workplace safety is synonymous with regulatory compliance, with organizations focusing primarily on complying with legal requirements to ensure minimal legal liability but when social expectations its most important organizational features are evolving there was a clear shift to a proactive safety culture based on employee engagement and empowerment.

Recent developments in the field of occupational safety underscore the recognition of employee engagement as a linchpin in achieving sustainable safety outcomes. Studies have consistently highlighted the correlation between engaged employees and improved safety performance metrics, including reduced accident rates, enhanced hazard identification, and increased compliance with safety protocols. Consequently, there exists a growing imperative for organizations to invest in strategies that not only impart requisite safety knowledge but also inspire active participation and ownership of safety practices among employees.

The rationale behind selecting KAHOOT gamified Learning Tools as a focal point of this research lies in its potential to revolutionize traditional training methodologies. KAHOOT, a widely utilized gamification platform, offers a dynamic and interactive learning environment characterized by elements such as quizzes, challenges, and leaderboards. By integrating gamified elements into OHS training programs, organizations seek to leverage intrinsic motivational drivers, such as competition and rewards, to captivate learners' interest and enhance knowledge retention.

The historical roots of this project idea can be traced back to seminal studies in the realms of gamification, adult learning theories, and organizational behavior. These studies have illuminated the transformative potential of gamified learning experiences in fostering intrinsic motivation, promoting active participation, and catalyzing behavioral change among learners. Moreover, within the context of OHS training, preliminary research has indicated promising outcomes associated with the integration of gamified elements, including heightened engagement levels and improved knowledge transfer.

However, despite the burgeoning interest and initial successes, there remains a dearth of empirical evidence elucidating the long-term efficacy and practical implications of employing KAHOOT gamified Learning Tools within the domain of OHS corporate training, especially within the specialized context of ports and terminals safety. The research problem at hand thus centers on addressing this knowledge gap and elucidating the mechanisms through which gamified learning interventions can enhance employee engagement, promote safety consciousness, and ultimately contribute to the creation of safer work environments.

KAHOOT is free, easy to use for students to use, and simple for trainers to learn. In the classroom, it is fast paced and fun, which supports creative energy and student participation. eLearning experts state “forty years of research says yes, games are effective learning tools. People learn from games . . . and they will learn MORE from a game than from other forms of learning” (Boller, 2012).

The significance of this study extends beyond the confines of academic inquiry, holding tangible implications for organizational practice and policy formulation. By shedding light on the transformative potential of gamified learning tools in augmenting OHS training efficacy, this research endeavors to equip organizational stakeholders, including trainers, managers, and safety professionals, with evidence-based insights to inform decision-making and enhance safety outcomes within the ports and terminals industry.

In summary, this research seeks to navigate the intersection of technology, education, and occupational safety, offering a nuanced understanding of the role played by gamified learning interventions in shaping employee engagement and safety culture. By bridging theoretical insights with practical applications, this study aims to contribute to the ongoing dialogue surrounding effective OHS training methodologies and pave the way for innovative approaches to fostering safer and healthier workplaces.

2. Research Problem:

The current research endeavors to explore the integration of KAHOOT gamified Learning Tools in Occupational Health and Safety (OHS) Corporate Training within the context of ports and terminals safety. This investigation is prompted by the growing need for innovative approaches to enhance employee engagement and foster a safety-centric organizational culture in workplaces characterized by diverse occupational risks.

2.1. Theoretical Gaps:

Despite the expanding interest in gamified learning interventions and their potential impact on OHS training, there exists a notable theoretical gap in understanding the specific nuances and outcomes associated with the integration of KAHOOT within the specialized domain of ports and terminals safety. The current literature provides limited insights into the distinctive factors that influence the efficacy of gamified learning tools in OHS training within this specific industry context.

2.2. Empirical Gaps:

Furthermore, the empirical gaps in the literature are evident in the scarcity of studies that have systematically examined the practical implications, long-term effectiveness, and organizational benefits of utilizing KAHOOT gamified Learning Tools in OHS corporate training for the ports and terminals sector. While preliminary research indicates positive outcomes in generic OHS contexts, there is a clear need for targeted investigations tailored to the unique challenges, occupational hazards, and workforce characteristics prevalent in ports and terminals.

2.3. Justification of the Problem:

The significance of addressing this research problem lies in its potential to bridge the existing knowledge gap and provide actionable insights for trainers, practitioners, and organizational leaders within the ports and terminals industry. Effective OHS training is critical for reducing accident rates, ensuring regulatory compliance, and cultivating a safety-conscious workforce. By investigating the integration of KAHOOT gamified Learning Tools, the research aims to contribute practical solutions to the challenges associated with engaging a diverse workforce in safety training programs.

2.4. Main Research Question:

Based on the identified theoretical and empirical gaps, the central research question guiding this study is:

"What is the impact of integrating KAHOOT gamified Learning Tools on employee engagement in Occupational Health and Safety Corporate Training within the context of ports and terminals safety?"

3. Research Significance

3.1. Theoretical Significance:

The research endeavors to contribute significantly to the theoretical landscape of occupational health and safety (OHS) training by addressing existing gaps in understanding the efficacy of gamified learning interventions, particularly within the context of ports and terminals safety. By exploring the integration of KAHOOT gamified Learning Tools, the study aims to advance scholarly discourse surrounding innovative pedagogical approaches and their impact on employee engagement and knowledge retention in OHS training programs.

The investigation of KAHOOT's effectiveness in enhancing employee engagement within OHS corporate training represents a novel extension of existing research paradigms. By delving into the intricacies of gamified learning experiences tailored to the unique challenges and occupational hazards prevalent in ports and terminals, the study seeks to broaden theoretical frameworks and refine conceptual models related to workplace safety training methodologies.

Furthermore, the research holds promise in offering theoretical insights into the mechanisms underlying employee motivation, learning outcomes, and behavioral change within the context of gamified learning environments. By elucidating the cognitive, affective, and behavioral processes at play, the study aims to contribute to a deeper understanding of how gamified learning interventions can be optimized to promote safety consciousness and cultivate a culture of prevention in high-risk work environments.

3.2. Empirical Significance:

In addition to its theoretical contributions, the research also holds significant implications for practical application and organizational practice within the ports and terminals industry. By addressing the empirical gap in the literature through rigorous empirical inquiry, the study seeks to provide actionable insights and evidence-based recommendations for enhancing the effectiveness of OHS training programs.

The findings derived from the empirical investigation of KAHOOT gamified Learning Tools have the potential to inform decision-making processes and guide resource allocation strategies within organizations seeking to optimize their safety training initiatives. Through the identification of

best practices, challenges, and implementation strategies, the research aims to equip organizational stakeholders with the knowledge and tools necessary to design and deliver engaging, impactful, and sustainable OHS training programs.

Moreover, the empirical significance of the study extends beyond individual organizations to encompass broader societal implications, including the potential for reducing workplace accidents, improving regulatory compliance, and enhancing overall occupational health outcomes within the ports and terminals sector. By fostering a culture of safety rooted in active employee participation and ownership, the research aims to contribute to the creation of safer, healthier, and more resilient work environments that benefit employees, employers, and society at large.

In summary, the research holds both theoretical and empirical significance by advancing scholarly understanding of gamified learning interventions in OHS training and providing practical insights to drive organizational change and promote workplace safety within the ports and terminals industry. Through its dual focus on theoretical refinement and real-world application, the study seeks to catalyze positive transformations in OHS training practices and contribute to the broader discourse on organizational learning, human factors, and safety management.

4. Research Questions:

Question 1: How does the integration of KAHOOT gamified Learning Tools impact employee engagement levels in Occupational Health and Safety (OHS) Corporate Training within the context of ports and terminals safety?

Question 2: How do demographic factors (e.g., age, educational background, job role) influence the reception and effectiveness of gamified learning interventions in OHS training programs within the ports and terminals industry?

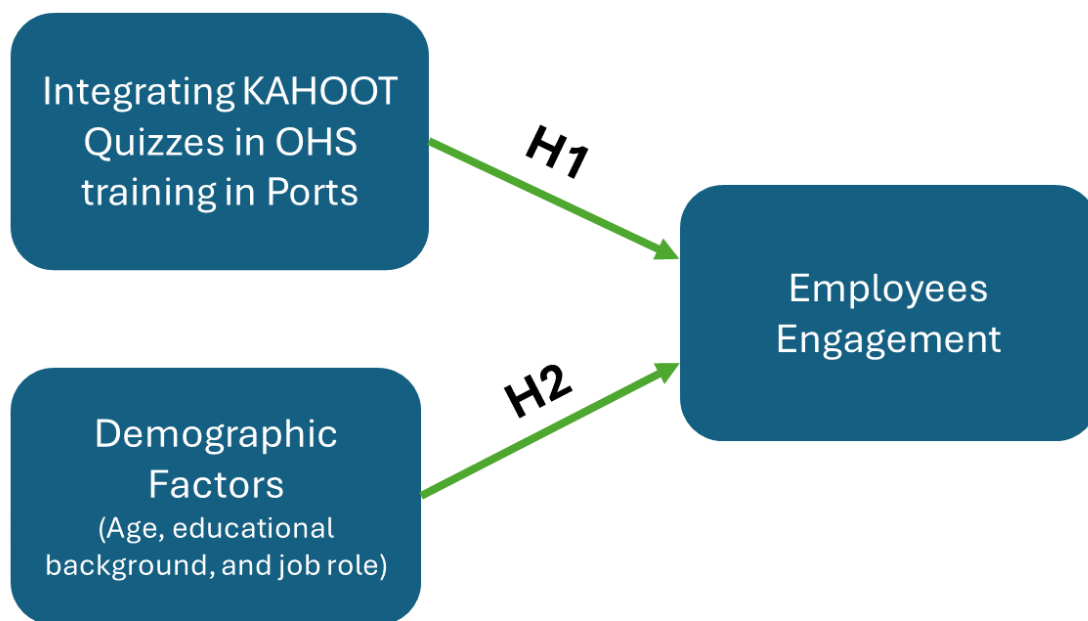
5. Research Objectives:

1. To assess the impact of integrating KAHOOT gamified Learning Tools on employee engagement levels in Occupational Health and Safety (OHS) Corporate Training within the context of ports and terminals safety.
2. To investigate how demographic factors, such as age, educational background, and job role, influence the reception and effectiveness of gamified learning interventions in OHS training programs within the ports and terminals industry.

6. Research Hypothesis:

1. Integrating KAHOOT gamified Learning Tools significantly enhances employee engagement levels in Occupational Health and Safety (OHS) Corporate Training within the context of ports and terminals safety.
2. Demographic factors, such as age, educational background, and job role, significantly influence the reception and effectiveness of gamified learning interventions in OHS training programs within the ports and terminals industry.

7. Research Model:



8. Research Empirical:

The suggested industry/organization for the empirical study is the port and terminal sector. Ports and terminals serve as crucial hubs for global trade and transportation, involving diverse workforces and facing significant occupational health and safety challenges. Conducting the study within this industry offers relevance to the research topic of enhancing employee engagement in Occupational Health and Safety (OHS) Corporate Training.

Additionally, port and terminal facilities provide researchers with accessible settings for data collection, uphold ethical standards regarding participant welfare, and represent industries with high-risk work environments.

Therefore, focusing on the port and terminal sector ensures alignment with research objectives while offering a representative setting for the study.

9. Research Methodology:

Research Philosophy: Interpretivist

Research Approach: Mixed (Blend of deductive and inductive)

Research Strategy: Mixed-Methods

Research Choice: Mixed (Qualitative and Quantitative)

Time Horizon: Cross-sectional

Data Collection and Analysis Techniques: Survey and Statistical Analysis

10.Suggested Project Structure:



11. Literature Review:

The literature review serves as a critical analysis of existing research and literature pertinent to the graduation project, focusing on enhancing employee engagement in Occupational Health and Safety (OHS) Corporate Training through the utilization of KAHOOT gamified Learning Tools. This review encompasses scholarly articles, books, and other relevant sources to provide a comprehensive understanding of the current state of knowledge in the field and identify gaps or inconsistencies that the research aims to address.

Theoretical Foundations of Gamified Learning:

The theoretical framework underpinning gamified learning draws from various disciplines, including educational psychology, behavioral economics, and game design principles. Research by Becker (2001) suggests that games offer effective avenues for teaching complex concepts by immersing learners in interactive experiences that promote active engagement and knowledge retention. Clark and Mayer (2008) emphasize the cognitive benefits of multimedia learning, highlighting the importance of incorporating elements such as interactivity and feedback into instructional design to optimize learning outcomes.

Gamification in Occupational Safety:

Gamification, the application of game design elements in non-game contexts, has gained momentum in the field of occupational safety as a means of motivating behavior change and enhancing learning experiences. Becker (2007) discusses the potential of gamified learning interventions to foster safety consciousness, improve hazard identification skills, and cultivate a culture of prevention among employees. Studies have demonstrated the effectiveness of gamification in increasing engagement levels and promoting active participation in safety training programs (Boller, 2012).

KAHOOT as a Gamification Platform:

KAHOOT emerges as a prominent gamification platform renowned for its intuitive interface, dynamic features, and ability to create immersive learning environments. Boller (2012) highlights KAHOOT's gamified quizzes, challenges, and leaderboards as effective tools for stimulating learner motivation and enhancing knowledge acquisition. Its accessibility and adaptability make it particularly suitable for corporate training settings, where engaging diverse demographics of employees is essential for effective learning outcomes.

Empirical Evidence and Research Gaps:

While theoretical frameworks provide a strong foundation for understanding the potential of gamified learning, empirical studies examining the efficacy of KAHOOT gamified Learning Tools in OHS training, especially within the ports and terminals industry, are limited. Existing research primarily focuses on generic workplace safety contexts and demonstrates positive outcomes, including increased engagement levels and improved learning outcomes (Becker, 2007). However, there is a notable gap in targeted studies exploring the practical implications and long-term effectiveness of KAHOOT specifically within the specialized domain of ports and terminals safety.

Practical Implications and Future Directions:

The practical significance of integrating KAHOOT gamified Learning Tools lies in its potential to revolutionize traditional training methodologies and address the unique challenges associated with OHS training in high-risk industries. By leveraging gamification principles, organizations can create engaging learning experiences that resonate with employees, promote active participation, and drive behavioral change. Future research endeavors should focus on filling the empirical gaps in the literature, conducting rigorous studies to validate the effectiveness of KAHOOT in OHS training within the ports and terminals sector, and exploring innovative approaches to further enhance employee engagement and safety culture.

In summary, the literature review provides a comprehensive overview of the theoretical foundations, empirical evidence, and practical implications of utilizing KAHOOT gamified Learning Tools in OHS corporate training. It underscores the need for further research to address existing gaps in the literature and advance our understanding of gamified learning interventions in promoting safety consciousness and fostering a culture of prevention in high-risk work environments, particularly within the ports and terminals industry.

12. References:

- Boller, S. (2012, October 20). Game based learning: Why does it work? BLP News - Lessons on Learning Blog. Retrieved from http://www.bottomlineperformance.com/gamebasedlearning/#_edn2
- Becker, K. (2007). Digital game-based learning once removed: Teaching teachers. *British Journal of Educational Technology*, 38(3), 478-488.
doi: 10.1111/j.1467-8535.2007.00711.x
- Becker, K. (2001). Teaching with games: The minesweeper and asteroids experience. *Journal of Computing in Small Colleges*, 17(2), 23-33.
- Clark, R. & Mayer, R. (2008). *eLearning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning*. San Francisco, CA: Pfeiffer.