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The Sustainability of Corporate E-training Programmes : A Conceptual Paper

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ABSTRACT *This review focuses on the sustainability of corporate e-training programs in Sri Lanka and the Maldives. The increasing adoption of electronic training across diverse industries worldwide is driven by factors such as cost-effectiveness, time efficiency, and easy access to learning resources. A key advantage is the ability to effectively align resources for employees dispersed across different locations within the same organization. However, despite these benefits, the literature highlights several challenges in aligning employees with e-training platforms. These challenges include employees' technology self-efficacy and technology-related anxiety. Additionally, research suggests that cultural differences across countries could significantly impact the sustainability of these e-training programmes. The approach highlights how cultural differences influence organisational perspectives on employee development and e-training adoption. The literature review was conducted using databases including SAGE, Emerald, Elsevier, and Google Scholar. The objective of this review is to identify the influencing factors for the sustainability of e-training programs. In the proposed conceptual framework, the sustainability of e-training is identified as the dependent variable. Technology self-efficacy serves as the independent variable, while cultural aspects function as a moderating variable. Additionally, technology anxiety acts as a mediating variable influencing the relationship between technology self-efficacy and the sustainability of e-training. The findings suggest that technology self-efficacy, anxiety, and cultural variation are critical determinants of e-training sustainability. Future research can expand on these relationships and test the framework empirically.*

Keywords: Sustainability of Corporate e-training, Technology Self- efficacy, Technology Anxiety, Culture

INTRODUCTION

Sustainable e-learning programs require careful design and management to ensure long-term viability. Key factors include stakeholder-cantered approaches, cost-effectiveness, and operational efficiency (Chipere, 2017). A framework incorporating these principles can lead to successful program development and implementation. However, grassroots e-learning initiatives often face challenges in achieving sustainability, despite being driven by capable educators addressing real educational problems (Gunn, 2010). Quality management processes are crucial for sustaining distance training in business environments, linking training to business strategy for competitive advantage (Echard and Berge, 2008). To develop a coherent body of knowledge on sustainable e-learning, further research is needed to explore various domains and factors affecting sustainability (Stepanyan et al.,

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2013). Supportive organizational structures, shared vision, staff accountability, and cross-functional collaboration are essential for overcoming institutional and cultural barriers to long-term sustainability in e-learning initiatives (Gunn, 2010).

Technology self-efficacy plays a crucial role in e-learning effectiveness. Research shows that technology self-efficacy influences attitudes towards technology, which in turn affects perceptions of training effectiveness (Cavanaugh et al., 2000). Low technology self-efficacy can lead to reduced confidence in learning through certain presentation modes, such as videos (Saville and Foster, 2021).

Technology anxiety and self-efficacy, both general and system-specific, impact beliefs and performance in IT training (Lee and Warkentin, 2005). To enhance learner self-efficacy in e-learning environments, designers should incorporate effective learning strategies, intelligent scaffolding, and accurate feedback (Hodges, 2013). Additionally, factors such as technology reliability and perceived distance in virtual classrooms can mediate the relationship between technology attitudes and training effectiveness (Cavanaugh et al., 2000). Well-designed e-learning systems that consider these factors can potentially improve learner self-efficacy and, consequently, achievement outcomes.

E-training has become an integral part of education globally, offering opportunities for cultural development and employee growth (Topor and Dinu, 2014). The culture-communication-technology-learning process facilitates cultural values transfer and enhances intercultural education (Topor and Dinu, 2014). However, implementing e-learning culture training programs presents challenges and benefits for employees (Herawati, 2021). Organizations must distinguish between e-learning and e-training, as they serve different purposes in employee development (Gabelaia and Bucovetchi, 2020). Cultural influences significantly impact e-training effectiveness, necessitating consideration of learners' diverse cultural backgrounds in design and implementation (Capatina, 2015). The integration of e-learning and e-training into corporate culture fosters a vibrant work atmosphere and facilitates employee growth (Gabelaia and Bucovetchi, 2020). As e-training continues to evolve, understanding cultural implications becomes crucial for improving learning experiences and addressing the needs of learners worldwide (Capatina, 2015).

Employee skill development is widely recognized as an essential component of organizational success. In an increasingly competitive and fast-changing corporate world, employees' capacity to adapt and evolve is critical (Groenewald et al., 2024). Competent and well-trained individuals are regarded as an organization's most important asset, driving innovation, efficiency, and performance. Investing in the continual development of personnel not only enhances operational capabilities but also fosters a culture of growth and resilience, ensuring long-term competitiveness (Chang, 2016).

To ensure employees are prepared to meet the dynamic changes in the industry, organisations must provide continuous and necessary training. The rapid pace of technological advancement means industries are constantly evolving, requiring employees to update their skills regularly to remain relevant and effective (Ajayi and Udeh, 2024). This ongoing need for training can be viewed as a costly activity, requiring significant investments of both time and resources (Groenewald et al., 2024).

However, it is also a strategic necessity; without this investment, organisations risk falling behind in the market, losing their competitive advantage, and failing to capitalise on new technologies. By focusing on continuous training, organisations

can enhance employees' skills while fostering a culture of learning and innovation, which is essential for sustaining success in a fast-evolving business landscape.

With technological advancements, the workplace has become more dynamic and complex in nature. Many organisations around the globe have adapted their delivery styles to meet evolving. To align with the requirements of a rapidly changing workplace, employees require regular training to reskill and upskill themselves (Cavanaugh et al., 2000). The traditional methods of training are increasingly unable to meet the training needs of effectively. When organisations are spread across multiple locations, delivering traditional, in-person training has become more costly and time-consuming.

The COVID-19 pandemic, accelerated global familiarity with technology compared to the recent past. This positive shift creating a significant impact on corporate training. The transition from traditional methods to e-training has become beneficial in many aspects (Rathee and Bhuntel, 2018).

Moreover, corporate e-training is cost-effective, as it eliminates expenses associated with traditional classroom-based training, such as travel and venue rentals (Zainab et al., 2017). The COVID-19 pandemic has enhanced technology adoption worldwide, leading to a profound shift in how people interact with digital devices (Adnan and Khalid, 2021). Prior to the pandemic, there was already an increasing reliance on technology; however, the need for social isolation and remote work accelerated this trend. Corporate employees often lack the time to attend regular in-person training sessions due to frequent travel. Consequently, there is a growing demand for a future-oriented, technology-driven era where learning can take place anytime, anywhere (Velananda and Wanninayake, 2020). As a result, individuals and organisations have rapidly adapted to using technology in previously unexplored ways, such as for communication, collaboration, and learning. This rapid technological adoption has profoundly impacted corporate training. Traditional in-person training sessions, once the norm, have largely been replaced by virtual alternatives. Companies now rely on e-learning platforms, webinars, and online workshops to ensure employees continue developing their skills despite physical distances (Giannakos et al., 2022). The shift to digital learning has made training more accessible, enabling employees to participate from anywhere in the world and at times that suit their schedules.

COVID-19 has had a remarkable impact in shifting from traditional training methods to electronic-based methods (Zhou et al., 2022). In 2020, there was a notable rise in the use and availability of digital tools and activities for online learning. Platforms like Zoom and Google Meet enabled real-time virtual classes with global experts and also offered recorded sessions for learners to access at their convenience (Lockee, 2021). Furthermore, the integration of technology into corporate training has opened up new avenues for interactive and personalised learning experiences. The COVID-19 pandemic has had a significant impact on the entire educational system, ushering in a new phase of education through 'e-learning' in corporate enterprises. Virtual training often replicates face-to-face sessions via virtual platforms such as Microsoft Teams, Zoom, and others. (Rekha and Shirmila, 2022). Additionally, tools such as virtual reality (VR) and artificial intelligence (AI) are increasingly used to create immersive and adaptive training programmes that cater to individual learning styles and paces (Rane et al., 2024). This not only enhances the effectiveness of training

but also helps organisations to track progress and measure outcomes more accurately. The pandemic-induced technological shift has transformed corporate training, making it more flexible, inclusive, and innovative than ever before.

Despite the positive insights about shifting to an e-training platform from traditional methods, the researcher observed several significant challenges that the industry encounters with this change. Notably, employees' technology self-efficacy, technology anxiety, and cultural factors have a considerable impact on the sustainability of e-training programmes. Technology anxiety, a key concern in adapting to the digital environments, has also been examined to some extent in existing literature. However, despite the focus on technology self-efficacy, and technology anxiety, the cultural impact on the sustainability of e-training programmes underexplored. Therefore, the researcher presents a review that focuses on these three aspects. Addressing this gap in research is crucial within the context of an increasingly globalised corporate environment. Tackling these challenges is essential to ensuring that e-training platforms are not only effective but also sustainable in the long term. Therefore, the purpose of this review article is to explore how technology self-efficacy, technology anxiety, and cultural dimensions may impact the sustainability of e-training programmes. By examining these factors through the conceptual framework, this review seeks to provide a theoretical underpinning.

Problem statement

Despite the growing adoption of e-training in corporate settings due to its flexibility and cost-efficiency, ensuring its long-term sustainability remains a significant challenge, particularly for countries like Sri Lanka and the Maldives. Key factors such as technology self-efficacy, technology anxiety, and cultural differences impact user engagement and program effectiveness. However, existing studies often examine these elements in isolation, lacking an integrated framework. This limits both theoretical insight and practical application. There is a critical need to explore how these variables interact to influence the sustainability of e-training programmes in culturally diverse corporate environments.

Objectives

1. To identify the impact of technology self-efficacy on the sustainability of e-training programs.
2. To examine the mediating role of technology anxiety in the relationship between technology self-efficacy and e-training sustainability.
3. To explore the moderating effect of cultural factors on the relationships within the conceptual framework.

Contextual Background

Post-COVID Shift in Corporate Training

Organisations' training delivery methods underwent a significant change as a result of the COVID-19 epidemic. Conventional face-to-face teaching techniques soon become impracticable due to travel limits and social distance laws. In response, businesses all over the world started using digital solutions including self-paced online modules, virtual workshops, and e-training. Because of their flexibility, scalability, and affordability, platforms like Zoom, Microsoft Teams, and learning management

systems (LMS) have taken centre stage in employee development initiatives.

Long-standing opposition to virtual learning environments was broken by this forced digital adoption, which also increased organisational and staff familiarity with online resources. With the use of artificial intelligence, adaptive learning technologies, and data analytics to monitor performance and engagement, e-training has progressed from a stopgap measure to a systematic method for ongoing professional development.

The post-pandemic era has redefined training expectations, learning must now be accessible anytime, from anywhere, tailored to individual needs, and responsive to changing work environments.

Corporate Training Landscape in Sri Lanka and the Maldives

The transition to e-training was both necessary and difficult in Sri Lanka and the Maldives. Despite their disparate infrastructures and economic sizes, these nations have several things in common, such a lack of physical training resources, geographically scattered organisations, and rising investments in digital transformation. Corporate training in both nations mostly depended on conventional, instructor-led forms prior to the epidemic, frequently taking place in centralised offices or training facilities. During travel restrictions and lockdowns, these techniques were rendered impracticable.

Organisations in these areas started using e-training to sustain worker development after COVID. While government-sponsored digital literacy programs encouraged wider use, sectors including banking, telecommunications, and education in Sri Lanka took the lead in establishing online platforms.

Following COVID, organisations in these sectors began utilising e-training to maintain employee growth. The establishment of internet platforms in Sri Lanka was spearheaded by industries such as banking, telecommunications, and education, even if government-sponsored digital literacy initiatives promoted broader use. Because of its scattered island terrain, the Maldives discovered that e-training was very helpful in connecting staff members in far-flung atolls. But there were challenges in both nations, such as uneven internet availability, low staff digital proficiency, and a lack of culturally appropriate training materials.

Deeper structural problems including digital inequality, technological fear, and a dearth of culturally relevant information were made clear by the quick switch to e-training. Even if digital learning's infrastructure and acceptability have grown, maintaining these programs over time calls for careful consideration of learner confidence, user experience, and cultural alignment.

Understanding the elements that affect the durability of etraining programs becomes a crucial research issue as both nations seek to modernise their workforces and maintain their competitiveness in the global market.

In the modern corporate world, technology has made a significant impact on the training arena. Globally dispersed human resources in organisations require training to align with its vision, regardless of their geographical location or role. In this process, the sustainability of the e-training programmes must be carefully assessed to ensure its long-term effectiveness and relevance. This literature review aims to explore key themes and insights from existing research on the challenges related to the sustainability of e-training programmes.

Theoretical Foundation

Albert Bandura's Social Cognitive Theory introduced the concept of self-efficacy, which refers to an individual's belief in their capacity to execute specific tasks successfully (Bandura, 1977). Self-efficacy plays a central role in shaping how individuals approach challenges, make decisions, and sustain effort under pressure. In digital learning environments, technology self-efficacy refers to employees' confidence in their ability to effectively use digital tools for learning and professional development.

Research suggests that individuals with higher levels of technology self-efficacy are more likely to embrace and persist in using e-training platforms, thereby enhancing learning outcomes and contributing to programme sustainability (Compeau & Higgins, 1995). Bandura's framework supports the premise that belief in one's technological capability is not only a motivational factor but also a determinant of sustained engagement with digital systems.

The Technostress Theory, conceptualized by Brod in 1984 and later developed by (Tarafdar et al., 2010), addresses the negative psychological impacts of technology use, including stress, fatigue, and anxiety. Technology anxiety—a key construct in this review—is defined as the apprehension or fear associated with using technology. It can negatively influence motivation, cognitive processing, and overall engagement in digital environments (Saadé and Kira, 2009).

Technostress theory posits that when individuals perceive technological systems as complex, unreliable, or misaligned with their skills, they experience emotional distress. This anxiety can mediate the relationship between self-efficacy and e-training sustainability, weakening the positive impact of self-efficacy on program adoption and persistence. Thus, reducing technology anxiety is critical to enhancing digital learning effectiveness.

Geert Hofstede's Cultural Dimensions Theory provides a framework for understanding how cultural values influence workplace behaviour, communication styles, and learning preferences (Hofstede, 1984). Key variables such as power distance, individuality vs. collectivism, and uncertainty avoidance have a direct impact on how employees interact with e-training platforms(Blanchard and Frasson, 2005).

As an example, in cultures with significant power distances, learners may prefer organised, instructor-led forms over self-directed learning. Similarly, collectivist societies may prefer collaborative training approaches. Cultural characteristics might thus modify the link between technological self-efficacy and e-training sustainability, increasing or decreasing its effectiveness depending on conformity with local norms and expectations.

Using Hofstede's model in this context allows for the creation of culturally sensitive e-training tactics as well as the design of material that is compatible with the values and learning styles of various employee groups.

Together, Bandura's Social Cognitive Theory, Technostress Theory, and Hofstede's Cultural Dimensions Theory provide a comprehensive foundation for understanding how individual confidence in using technology (self-efficacy), emotional responses to digital environments (anxiety), and culturally influenced learning preferences collectively shape the sustainability of e-training programmes in diverse organizational contexts.

Conceptual Clarifications

Traditional Training vs E-training

The traditional method of training was widely used by many organisations until technology began transforming various aspects of the business world. Traditional training methods, typically involving with the physical presence of resource personnel, included workshops, seminars, discussion cycles, and other formats depending on industry requirements.

With the technological shift in the corporate world, e-based training methods have become more widely adopted due to benefits such as cost-effectiveness, time efficiency, and flexibility. In the corporate sector, information and communication technology (ICT) is now extensively applied, not only in business operations and management but also in training. Companies have found that ICT-based training to be both practical and beneficial, a model that traditional higher education institutions can also adopt (Abid et al., 2005).

Further, (Sutarto et al., 2019, p. 30) note that the "e-training model was more effective than face-to-face training based on an increase in professional competence of non-formal educators". This suggests that the e-training approach offers a more tailored, flexible, and scalable learning environment, likely contributing to more substantial and sustained skill development. The ability to access resources at any time, along with interactive multimedia elements, enhances understanding and retention, leading to improved overall performance.

E-training and E-learning

"E-training has similarities with e-learning, especially from the technology applied as well as delivery methods. The basis that distinguishes the two is in terms of the time period involved. E-training usually involves a much shorter period of time compared to e-learning. This is because e-training is designed to enable participants to achieve specific training objectives" (Adnan & Khalid, 2021, p. 189).

E-learning and e-training both provide platforms for learners to engage in digital environments, but they differ in purpose and scope. E-learning typically refers to a broad range of online educational activities, including formal courses and informal learning, aimed at providing knowledge or skills over extended periods.

In contrast, e-training is more focused and goal-oriented, often used for specific skill development or professional training within a shorter timeframe. Understanding these differences is essential for selecting the most appropriate method to achieve educational or training goals with objectives.

Table 01 illustrates the term differences between e-training and e-leaning based on seven criteria: definition, outcome, time, target users, paradigm, and measurements (Mohsin and Sulaiman, 2013).

Criteria	E-Training	E-Learning
Definition	Training lies within the domain of the organisation: it is an intervention designed to produce behaviours from individuals that result in positive organisational outcomes.	Encompasses any type of learning content that is delivered electronically.
Outcome	Based on organizational needs; typically, used in professional or corporate settings.	Learner engagement in a structured learning process.
Time	Short duration.	Longer duration, depending on the programmes (example, degree, diploma etc.).

Criteria	E-Training	E-Learning
Target User	Employees or professional workers.	Adult learners.
Paradigm	Instructional, programmed instruction paradigm.	Web browsing, self-development paradigm.
Measurement	Measurement criteria: usage / cost reduction.	Measurement criteria: learning outcomes.

Table 1 Difference between the e-training and e-leaning

Table 01 demonstrates that the concept of e-training is particularly well-suited for employees and individuals seeking short courses to enhance or acquire new job-related knowledge and skills. In contrast, e-learning is more appropriate for learners pursuing longer-term academic programmes, such as those pursuing a diplomas, foundation courses, degrees, or postgraduate education.

By examining the nuances of both terms, it becomes clear that 'e-training' is the more appropriate terminology when referring to online learning platforms specifically intended for corporate sector employees. This term not only aligns with the nature of digital training programmes but also accurately conveys their purpose of enhancing professional skills and knowledge within an organisational context. Therefore, 'e-training' is the preferred term to use in discussions and documentation concerning corporate employee development through electronic means.

Review of Key Constructs

Sustainability of E-Training Programmes

Sustainability is a broad term that encompasses a wide range of contexts, including environmental conservation, economic stability, and social equity. It refers to practices and policies that aim to meet present needs without compromising the ability of future generations to meet their needs.

In business, education, and other fields, sustainability implies balancing long-term environmental, economic, and social goals in decision-making.

This review focuses on the sustainability of e-training programmes. Ensuring long-term sustainability requires planning and strategies that keep the programmes effective, relevant, and viable over time. Several factors must be maintained:

- Regular Content Review: Periodically review and update training content to ensure it remains current, relevant, and aligned with industry trends and organisational goals (Dachner et al., 2021).
- Modular Design: Develop training modules that can be easily updated or replaced without overhauling the entire programmes, allowing for rapid adjustments in response to changes in the industry (Kaizer et al., 2020).
- Adaptability: Design the programme to accommodate different learning styles, languages, and cultural contexts, making it accessible to a broader audience (Östlund, 2017).
- Performance Metrics: Establish key performance indicators (KPIs) to measure the programme's effectiveness, participant satisfaction, and impact over time(Mohsin and Sulaiman, 2013).
- Cultural Sensitivity: Ensure programmes are culturally appropriate and inclusive, avoiding biases and respecting audience diversity (Farmer, 2019).

E-training platforms also contribute to sustainability more broadly by offering cost savings, long-term ROI, economic accessibility, work-life balance, and other advantages. E-training programmes reduce expenses related to travel, accommodation, venues, and physical materials. These programmes reduce expenses related to travel, accommodation, venues, and physical materials. They can be reused, scaled, and updated without proportional cost increases.

Furthermore, e-training can make education and professional development more accessible to a broader audience, including those in remote or economically disadvantaged areas. Additionally, e-training programmes can be designed to accommodate individuals with disabilities and adapt to different learning needs, fostering inclusivity. Moreover, e-training offers flexibility, enabling individuals to balance their education with work, family, and other responsibilities, thereby improving overall well-being.

In the field of e-training research, many scholars have identified employees' technology self-efficacy and technology anxiety as key challenges to e-training adoption.

Technology self-efficacy in E-training Context

Technology self-efficacy refers to an individual's belief in their ability to effectively use and understand technology (Giles and Kent, 2016). It encompasses a person's confidence in their skills to learn, adapt, and perform tasks using technological tools, software, and devices (Ulfert-Blank and Schmidt, 2022).

It involves confidence in using tools, software, and digital systems, and the capacity to adapt to technological changes. According to (Bandura, 1977), self-efficacy is linked to an individual's belief in their capacity to act in specific contexts, especially within the context of education.

Furthermore, (Ruth et al., 2024) explains that technology self-efficacy supports creativity, innovation, and productivity in organisations. Self-efficacy with technology significantly impacts the perceived usefulness (PU) and ease of use, which in turn affects learner's intention to effectively engage with online learning (Rahman et al., 2023).

Effective e-training enhances employees' self-efficacy by equipping them with knowledge and skills, boosting confidence and motivation. When employees feel competent and supported through well-designed training, their self-efficacy increases, leading to higher motivation, improved performance, and greater job satisfaction (Ummiaty et al., 2022). This enhanced confidence can also encourage a proactive approach to problem-solving and innovation.

Conversely, poorly executed e-training can undermine employees' confidence, resulting in decreased motivation and lower performance (Mingyue et al., 2020). Therefore, the quality and effectiveness of e-training are critical for positively influencing employees' self-efficacy and overall productivity.

Technology Anxiety as a Mediator

Technology anxiety refers to the apprehension or fear individuals experience when interacting with new or unfamiliar technology. It denotes the extent of fear and apprehension that users feel when engaging with a particular technology (Chen et al., 2024). This phenomenon encompasses the nervousness or unease individuals might feel, which can impact their confidence and effectiveness in

using the technology (Maduku et al., 2023) . Moreover, computer or technology anxiety is a type of concept-specific anxiety, as it arises from a person's interactions with computers and is related specifically to those experiences (Saadé and Kira, 2009).This anxiety can arise from concerns about an individual's ability to use technology effectively, fear of making mistakes (Chien, 2008), or worries about the technology's reliability and security (Pfaffinger et al., 2021). It often results in avoidance behaviours, reduced productivity, and increased stress. Addressing technology anxiety requires providing adequate training, support, and reassurance to help individuals build confidence and smoothly transition to using new technological tools (Ang et al., 2022).

Research carried out by (Ismail et al., 2021) demonstrated that technology anxiety had a significant impact on the relationship between self-efficacy and the actual use of the e-learning system.

Specifically, heightened levels of technology anxiety could hinder individuals' confidence in their own abilities, which in turn affected employee engagement and effective utilisation of the e-learning platform (Ismail et al., 2021). Confidence in one's computer skills plays a significant role in reducing the anxiety associated with using learning platforms, thereby enhancing the perceived ease of use of the learning platform.(Saadé and Kira, 2009).

Culture as a Moderator

Cultural understanding is one of the key elements that organisations should align with to effectively support their globally dispersed employees. Recognizing cultural differences facilitates the creation of a positive work environment (Stahl et al., 2010). When providing training to individuals from diverse backgrounds, it is essential to consider various factors. Culture is a multifaceted and expansive collection of relationships, values, attitudes, behaviors, practices, and beliefs that unite a particular group of people (Beno, 2021).

The sustainability of e-training programmes, particularly in the context of cultural dimensions, involves creating training systems that are not only effective and inclusive but also adaptable to long-term needs and diverse cultural contexts. Cultural factors greatly impact e-learning adoption and success. Research highlights Hofstede's dimensions and other cultural theories, showing how these influence user experiences and interactions in e-learning environments, shaping how learners engage with and benefit from online education(Permatasari et al., 2019). Scholars have highlighted that culture is a significant barrier to the sustainability of e-training programmes (Zhang et al., 2004). Cultural differences can influence how individuals perceive and engage with e-learning content, potentially leading to reduced participation and effectiveness (Zhu et al., 2009). These challenges are particularly pronounced in global organisations with diverse cultural backgrounds. To address this issue, it is essential to incorporate culturally sensitive content and approaches that resonate with diverse learners, ensuring the sustainability and success of e-training programmes (Etri, 2021). Language and cultural barriers can present significant challenges in e-learning, particularly within global organisations that have staff from diverse linguistic and cultural backgrounds (Azer and El-Sherbini, 2011). These barriers can hinder effective communication, engagement with training materials, and collaboration among peers. To mitigate this challenge, organisations can provide training materials in multiple languages and offer

translation and interpretation services as needed (Azer and El-Sherbini, 2011). Additionally, fostering a culture of inclusivity and diversity is crucial, as it ensures that employees from diverse backgrounds feel appreciated and supported in their learning and development (Hussein and Farhan, 2023).

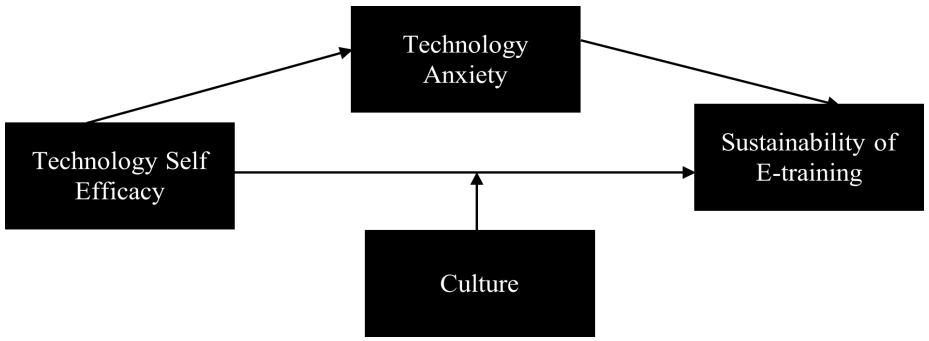
When designing training materials, they should reflect diverse cultural perspectives and practices. This includes using examples and scenarios that are relevant to different cultural contexts, and providing training content in multiple languages. Additionally, consider cultural nuances in communication styles should be considered to ensure clarity and accessibility. This approach enables trainees to effectively align with the training programme.

Conceptual Framework

With the help of extensively reviewed literature and application of these (TAM model, Hofstede cultural model) models to identify the impact of the sustainability of e-training Programmes.

In the outlined conceptual framework, the sustainability of e-training is positioned as the dependent variable. Technology self-efficacy is the independent variable, with cultural factors playing a moderating role. Furthermore, technology anxiety serves as a mediating variable that affects the link between technology self-efficacy and the sustainability of e-training.

Figure 1 Proposed conceptual model



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Identified Research Gaps

Identifying gaps in research is critical for revealing areas that require further investigation or knowledge (Miles, 2017). These gaps can take many different forms, depending on what is lacking in the existing body of knowledge or practice. Identifying research gaps is an essential goal of literature reviewing (Christoph and Kranz, 2015). Various types of gaps that exist, each contributing to the discovering new knowledge. A theocratical gap occurs when existing theories do not adequately explain a phenomenon, or when there is a lack of theories addressing a specific

problem (Jacquet and Van Der Does, 2021). The literature indicates there is a theoretical gap in this area of study.

While prior studies have examined technology self-efficacy, technology anxiety, and culture in the context of e-training as individual research areas, there is limited research on the sustainability of e-training programmes (Kang et al., 2022). The existing literature has explored individual constructs, but not their combined effect on sustainability, indicating a missing empirical linkage and highlighting an empirical gap in the area of study.

Moreover, there is particularly a notable lack of research in the specific contexts of the Maldives and Sri Lanka, which this study aims to address. This indicates that there is a knowledge gap in this area of study. This indicates there is a contextual gap to the area of study.

Foundational work by Albert Bandura introduces the concept of self-efficacy and its influence on behaviour and performance, which is crucial to understanding how technology self-efficacy can affect e-training outcomes and sustainability (Bandura, 1977).

Scholars provides a validated measure of computer self-efficacy and explores how it impacts computer-related tasks (Compeau and Higgins, 1995). It will help you understand how to measure and analyse technology self-efficacy in corporate e-training contexts.

Technology-related anxiety and stress (referred to as 'technostress') can significantly impact end-user performance (Saleem et al., 2021), often leading to decreased productivity and job satisfaction. It is valuable for understanding how technology anxiety influences e-training (Saleem et al., 2024) and the psychological factors that impact its sustainability (Tarafdar et al., 2010). This indicates that there is a theoretical gap in the study.

The study of cultural dimensions plays a key role in explaining how cultural factors affect workplace behaviour, including how employees approach technology adoption and training (Hofstede, 1984). In this study, Hofstede's framework serves as a foundation for exploring the intersection of cultural dimensions with technology self-efficacy and technology-related anxiety.

Discussion

The implications of technology self-efficacy extend beyond individual learners to the organisational level, particularly in the context of e-training programmes. Effective e-training is crucial for enhancing employees' self-efficacy, which, in turn, affects their job performance, motivation, and satisfaction. When e-training programmes well-designed and provide adequate support, employees feel more competent and confident in their roles. (Loomba and Karsten, 2018). This increased self-efficacy leads to better problem-solving skills, a proactive approach to innovation, and overall improved performance. On the other hand, poorly executed e-training can erode employees' confidence, resulting in reduced motivation and lower performance. Thus, the quality of e-training programmes integral to fostering high levels of technology self-efficacy among employees. By ensuring that training is comprehensive, engaging, and supportive, organisations can significantly enhance employees' self-efficacy, leading to greater productivity and job satisfaction.

Conversely, neglecting the design and implementation of effective training can undermine employees' confidence and hinder their performance. Therefore,

investing in well-structured e-training initiatives is essential for maximising the benefits of technology self-efficacy in the workplace.

The roots of technology anxiety often include concerns about one's ability to use technology effectively, fears of making mistakes, and worries about the reliability and security of the technology (Ismail et al., 2021). These concerns can lead to avoidance behaviours, decreased productivity, and heightened stress levels. Addressing this anxiety is crucial for improving individuals' interactions with technology. Effective strategies for mitigating technology anxiety include providing comprehensive training, offering support, and giving reassurance to help individuals build confidence and ease their transition to new technological tools (Saville and Foster, 2021).

Research underscores the importance of addressing technology anxiety in relation to self-efficacy and technology use. Addressing technology anxiety is vital for improving individuals' technological experiences. By focusing on reducing anxiety through targeted training and support, and by enhancing users' confidence in their technological abilities, organisations can facilitate more effective technology use, ultimately improve productivity and engagement with e-learning and other technological systems.

Addressing cultural differences is critical for the success and sustainability of e-training programmes. By incorporating culturally sensitive content, providing multilingual resources, and fostering an inclusive environment, organisations can enhance the effectiveness of their training initiatives and better support their diverse workforce. Ensuring that training programmes are adaptable to cultural contexts will not only improve engagement and participation but also contribute to a more positive and productive work environment (Kurian et al., 2021).

The literature indicates that examining the interplay between technology self-efficacy, technology anxiety, and cultural impact is a crucial area for in-depth analysis. Understanding how these factors interact can provide valuable insights into how individuals from diverse cultural backgrounds perceive and engage with technology.

Technology self-efficacy, or an individual's confidence in their ability to use technology effectively, can significantly influence their interaction with technological tools and platforms. Conversely, technology anxiety, which encompasses the fear or apprehension individuals feel towards new technologies, can hinder their engagement and performance. Both of these factors are deeply influenced by cultural contexts, which can shape individuals' attitudes and experiences with technology.

Technology self-efficacy plays a crucial role in corporate e-training and employee performance. It is positively correlated with academic achievements in distance education (Li, 2020) and has a significant impact on personal knowledge and information management for sustainable lifelong learning and organizational performance (Shahzad et al., 2023). Self-efficacy, along with training and time management, are key strategies to overcome technology overload in the workplace (Rasool et al., 2022).

Employee training, organizational commitment, and self-efficacy collectively influence employee performance in various industries, including hospitality (Hamid et al., 2023). To enhance e-learning effectiveness, organizations should consider factors such as online connection, learning experience, classroom environment,

and teaching capabilities (Li, 2020). Implementing proper training programs before introducing new technologies and establishing guidelines for work-life balance can help reduce technology overload and improve employee performance (Hamid et al., 2023; Rasool et al., 2022).

Cultural impact plays a significant role in shaping both technology self-efficacy and technology anxiety (Sandon and Ciamician, n.d.). Cultural differences can affect how individuals approach learning new technologies, how they perceive their own technological abilities, and how they experience and cope with technology-related stress.

An in-depth analysis of these elements is essential for developing effective strategies to address technology anxiety, enhance self-efficacy, and create culturally inclusive e-training programmes. This approach can lead to improved technology adoption, better training outcomes, and more effective support systems tailored to diverse global workforces.

Interrelationships Between Key Concepts

This section describes how the fundamental concepts are interrelated, emphasising how they impact, support, and build on one another. Examining these linkages clarifies the conceptual framework, giving an organised knowledge of the study's main concepts and their dynamic interactions.

Relationship between Technology Self-efficacy and Sustainability of E-training

The relationship between technology self-efficacy and e-training program sustainability in HR contexts is multifaceted. A significant positive relationship exists between technology self-efficacy and personal knowledge management for sustainable lifelong learning and organizational performance (Shahzad et al., 2023). In remote work settings, technology ease of use, manager support, and peer support positively influence self-efficacy, which in turn affects training transfer, work engagement, and job satisfaction (Lathabhavan and Griffiths, 2023). Self-confidence directly influences self-efficacy, grit, and perceived ease of use of e-learning platforms in corporate training (Malureanu et al., 2021). These findings highlight the importance of, and the relationship between, the independent variable—technology self-efficacy, and the dependent variable, the sustainability of e-training programmes.

Technology anxiety as the mediator for Technology Self-efficacy and Sustainability of E-training

The relationship between e-training sustainability and technology self-efficacy is influenced by technology anxiety. The studies examine factors influencing e-learning adoption and sustainability in higher education. Technology anxiety is identified as a significant mediator, with lower anxiety levels associated with increased e-learning system usage (Ismail et al., 2021). Higher technology self-efficacy leads to increased confidence in using e-learning systems, particularly for those with low technology anxiety (Jason D. Saville & Lori L. Foster, 2021). The findings of (Malureanu et al., 2021) highlighting the importance of user-friendly interfaces in sustaining e-training initiatives.

The findings highlight the technology anxiety mediate between the technology

anxiety and the e-training sustainability.

Culture as the moderator for Technology Self-efficacy and Sustainability of E-training

The relationship between technology self-efficacy and e-learning sustainability is influenced by cultural factors. Studies have shown that cultural dimensions like individualism/collectivism, masculinity/femininity, and power distance impact the adoption of e-learning technologies.

The successful implementation of e-training in business faces challenges, particularly in developing countries, where cultural factors influence individual behaviours in adopting new technologies (Permatasari et al., 2019). Understanding these cultural influences is essential for effectively implementing e-training strategies and fostering sustainable employment and social empowerment (Singh et al., 2022). The findings highlight the culture moderate between the technology self-efficacy and the e-training sustainability.

Implications

This conceptual review adds value to the academic debate by including three essential variables: technological self-efficacy, technology anxiety, and cultural dimensions. Traditionally, these notions have been examined individually or in discrete disciplinary contexts. This review fills an essential theoretical vacuum in the corporate e-training literature by combining these factors into a coherent framework.

The concept builds on Bandura's self-efficacy theory (Bandura, 1977) by applying it to a digitally mediated corporate learning environment in poor countries. It shows how self-efficacy affects participation with e-training platforms and how this relates to long-term program sustainability. Furthermore, the inclusion of technology anxiety as a mediating variable builds on technostress theory (Tarafdar et al., 2007) providing a more comprehensive understanding of how emotional and psychological reactions influence digital learning outcomes.

Hofstede's cultural dimensions (Hofstede, 1984) are used as a moderating variable, which contributes to intercultural learning research. This adds theoretical richness by acknowledging that the efficacy of digital training interventions is determined not just by person capacity or technological design, but also by cultural fit. The suggested model lays the groundwork for future empirical validation using quantitative approaches such as structural equation modelling and qualitative research in a variety of organisational situations.

Future Research

In a nutshell, a nuanced understanding of how technology self-efficacy, technology anxiety, and cultural impact interact is essential for developing effective e-training strategies. By addressing these factors, organisations can improve technology adoption, support diverse employees, and achieve better training outcomes. Investing in well-structured, culturally inclusive e-training programmes will not only boost individual confidence and performance but also contribute to a more positive and productive work environment. Furthermore, it would impact the sustainability of the e-training programmes.

The study calls for empirical validation and further research to explore how these factors interact across diverse corporate contexts.

Limitations

This researcher identifies several potential limitations:

- Context-Specific Findings: The research focuses on technology self-efficacy, technology anxiety, and cultural dimensions within the context of corporate e-training. This focus may limit the applicability of the findings to other contexts, such as academic or informal training environments.
- Cultural Bias: While the research aims to explore cultural dimensions, the interpretation of "culture" may vary across different cultural groups, potentially introducing bias into the analysis. Additionally, the research is limited by its focus on specific cultural contexts (e.g., the Maldives and Sri Lanka), which may not be representative of global or other regional perspectives.
- Short-Term vs. Long-Term Impact: The study may focus on short-term outcomes or initial perceptions, whereas the sustainability of e-training requires long-term analysis. A lack of longitudinal data could affect the ability to fully assess the lasting impact of e-training programmes.

Conclusion

The interplay between technology self-efficacy, technology anxiety, and cultural impact is crucial for understanding and improving e-training programmes within organisations. Technology self-efficacy—an individual's confidence in their ability to use technology—plays a significant role in job performance, motivation, and satisfaction. Well-designed e-training programmes that enhance self-efficacy lead to improved problem-solving skills, innovation, and overall performance. Conversely, poorly executed training can diminish confidence, reduce motivation, and negatively impact performance. Focusing on technology anxiety is equally important. This anxiety, driven by concerns about technology use, fear of making mistakes, and worries about reliability, can lead to avoidance behaviours and decreased productivity. Effective strategies to mitigate this anxiety include comprehensive training, robust support systems, and reassurance, all aimed at building confidence and easing the transition to new technologies.

Moreover, cultural differences significantly affect both technology self-efficacy and technology anxiety. For e-training programmes to be successful and sustainable, they must incorporate culturally sensitive content, provide multilingual resources, and foster an inclusive environment. This approach ensures that training is relevant and accessible to a diverse global workforce, enhancing engagement, participation, and overall effectiveness.

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