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Interpersonal skills training in Virtual Reality: Lessons for Event Management

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INTERPERSONAL SKILLS TRAINING IN VIRTUAL REALITY

Abstract

The integration of Virtual Reality (VR) into student and staff training represents a promising development with potential benefits for the event industry. Traditional training methods often face limitations in replicating real-world scenarios, such as crisis management or customer service interactions. This paper examines how VR technology can effectively train interpersonal skills. A qualitative research approach was employed, utilising self-reported conversations, thematic analysis and Creative Analytical Practice for data collection and analysis. An interplay of two factors has been identified, including Immersion and Cognition, and Instant Feedback and Reflection. The results show that despite challenges such as motion sickness or complicated navigation system, VR enhances trainee engagement with study material and provides a safe space for learning and reflection.

Keywords: VR training; Immersion; Interpersonal skills; Staff development

INTERPERSONAL SKILLS TRAINING IN VIRTUAL REALITY

Introduction

The event industry, a vital component of the broader visitor economy, is inherently human-centric and delivers high-contact services. It encompasses a diverse range of activities, including trade fairs, sporting events, conferences and festivals. Each event type demands staff equipped with strong interpersonal and problem-solving skills to ensure successful delivery and create positive, memorable experiences for attendees (Werner et al., 2022). The quality of the “soft skills”—including communication, conflict resolution, and customer service — is particularly crucial, as they directly impact customer satisfaction and underscores the necessity of effective staff training (Uhl et al., 2023).

In general, traditional training methods, such as role-playing exercises and classroom-based learning often fall short in replicating the complex, high-stress scenarios encountered in real-world situations. A recent review of employee training in the visitor economy sector concluded that staff training options are predominantly limited to on-the-job and apprenticeship formats (Tracey & Swart, 2020).
The growing popularity and accessibility of digital solutions such as virtual reality (VR) pave the way for a new branch of research focused on the opportunities and challenges these technologies bring. VR can offer potential advances in self-regulated training for jobs that require quick decision-making and high levels of sensitivity and discretion (Tracey & Swart, 2020). VR scenarios enhance practical skills and foster the development of cognitive skills by simulating essential knowledge and processes relevant to real-world fields (Li et al., 2022).

By allowing trainees to experience realistic, interactive scenarios, VR has the potential to enhance the development of essential skills in event management, such as managing customer complaints, coordinating emergency responses, and

navigating high-pressure interactions. For example, a VR-based module can simulate a scenario where a trainee must de-escalate a tense customer interaction in real time, providing a safe space for learning and experimentation (Williams et al., 2023). This approach addresses the limitations of traditional methods by offering a more engaging and practical learning experience tailored to the specific requirements and learner's needs (Moore et al., 2022; Tusher et al., 2024).

Despite the promising potential of VR for training, existing research is predominantly focused on its application in fields like healthcare, military training, and manufacturing (e.g., Kleygrewe et al., 2023; Narciso et al., 2019; Riches et al., 2022), with limited focus on the visitor economy sector (Lui & Goel, 2022) and event management, in particular. To date, the authors have not identified any research papers specifically addressing this topic.

This study aims to fill this gap by exploring how VR can be used in training interpersonal skills such as communication, empathy, active listening and conflict resolution. The authors collaborated with Bodyswaps, a provider of immersive AI simulations for education, healthcare, and enterprise. A VR module on customer experience training was used for this research. Through a qualitative approach combining individual VR sessions with participant verbal self-reflections the research specifically investigated the effectiveness of the VR training module, analysing its impact on learner engagement, skill acquisition, and the potential for translating virtual experiences into real-world competencies.

The following sections are structured as follows: first, a review of relevant literature and guiding theoretical frameworks is introduced; second, the qualitative research methodology, which combines rhizomatic conceptualisations and elements of Creative Analytic Practice (CAP), is presented; third, the results of the research

are analysed and discussed; and finally, practical implications and recommendations for future research are outlined.

Literature Review

Training in VR

In contemporary society, providing effective staff training is crucial for organisations aiming to maintain a competitive advantage and foster employee development. High-quality training equips staff with essential knowledge and skills, thereby enhancing organisational performance and effectiveness (Lui & Goel, 2022). VR offers the potential for highly engaging and immersive experiences, presenting real opportunities for learning and skill development.

There is a significant lack of research on the application of VR in event management training. As a result, the literature from the hospitality and tourism sectors have been used to build the argument, given the overlap in skill sets and training needs across these industries. All three sectors heavily rely on interpersonal skills, emphasising customer interaction, satisfaction, and experience delivery (Lui & Goel, 2022). For instance, effective communication, the ability to manage guest requests, strong negotiation skills, emotional intelligence, empathy, and intercultural sensitivity are critical interpersonal skills for managing customer relationships across these domains (Pranić et al., 2025). These overlapping skill sets highlight the necessity of targeted training programmes that enhance soft skills and interpersonal capabilities, which are pivotal for maintaining high service standards and ensuring customer satisfaction (Leung et al., 2022).

Traditional training methods like role-playing and mentorship, have historically been used to develop these skills, providing trainees with practical experience and real-world insights (Tracey & Swart, 2020). However, these methods have

limitations, including the lack of scalability and difficulty in replicating diverse and complex scenarios. This is where VR-based training can bridge the gap, providing immersive and interactive environments that simulate real-world challenges, such as handling dissatisfied customers or coordinating responses during crises (Howard et al., 2021).

Research on the effectiveness of VR training in the visitor economy sector and its ability to transfer skills highlights several advantages. Thus, Patiar et al. (2021) indicate that virtual environments offer effective solutions for developing practice-based knowledge and enhancing employability skills. Leung et al. (2022) argue that VR could lead to higher trainee satisfaction performance. Finally, Price-Howard and Lewis (2022) find a positive effect of VR on learners' motivation to explore creative ideas and learn in a virtual learning environment. Interestingly, Lui and Goel (2022) demonstrate that there is no difference between learning in the real setting and learning in VR. Hence, moving from real to virtual setting can result in achieving same learning outcomes.

There are two ways to utilise VR for training: role-play applications, where trainees interact with other trainees and trainers via avatars, and applications where interactions occur between a learner and a virtual agent (avatar), for example, through speech recognition or chatbots (Fox et al., 2015; Uhl et al., 2023). This research focuses on the latter.

Immersion, Presence, and Embodiment

A VR experience is characterised by its capacity to deliver physical immersion, high levels of presence (Guttierrez et al., 2008; Lui & Goel, 2022; Uhl et al., 2023), and embodiment (Johnson-Glenberg, 2018). In technological terms, immersion in VR refers to the exchange of sensory input from reality with digitally

generated sensory input, including images and sound (Freina & Ott, 2015). There is a difference between immersive and non-immersive VR. In the former, a user experiences presence when their brain and nervous system react and behave similarly to being in the same situation in the real world (Slater, 2003). A non-immersive VR is typically experienced from the outside, for example, using a computer display (Jensen & Konradsen, 2018) without the effect of presence.

Social presence refers to the "the sense of co-presence, interaction, and engagement that learners experience with other virtual objects" in the virtual environment (Uhl et al., 2023, p. 3). It consists of five dimensions: sensory, cognitive, affective, active, and relational (Chertoff et al., 2008). The sensory dimension includes all sensory input and perceptions of those stimuli. The cognitive dimension refers to mental engagement with the experience. The affective dimension encompasses a participant's emotions stimulated by the experience. The active dimension refers to a personal connection with the experience. Finally, the relational dimension comprises the social aspects of experience (Chertoff et al., 2008). The more presence a user feels, the more immersive and effective the learning is. It may enhance motivation (Robb & Sutton, 2014) and levels of communication, collaboration, and empathy (Zhao et al., 2014).

Presence provides a sense of embodied cognition; therefore, the fidelity of human-sensory systems is paramount in creating a sense of "being there" in an artificial virtual environment (Cooper et al., 2021). VR fidelity of realism refers to the degree of accuracy with which a VR application recreates real-world environments and experiences (Al-Jundi & Tanbour, 2022). Howard et al. (2021) identify two types of VR fidelity, namely physical fidelity, which refers to the degree of transfer environment replication, and psychological fidelity, which refers to the extent the

virtual environment prompts similar cognitive processes. Both fidelities directly impact the relationship between location awareness and cognitive absorption. Lui and Goel (2022) argue that location awareness in VR and task-related cues, which include visual, haptic, audio, and textual information, are important in enhancing a trainee's engagement with the learning context and improving learning outcomes.

The theory of embodied cognition highlights the significant role of the body in shaping cognitive processes. It emphasises the perception-action loop, proposing that perception and action are deeply interconnected and influence each other continuously (Zhan et al., 2024). In the realm of VR experience, embodiment refers to the mental representation of the body within the virtual space (Scavarelli et al., 2021). Borrego et al. (2019) outline three key aspects of embodiment. These include Body Ownership, which refers to the feeling that the body one occupies is truly one's own; Self-Location, the sense of being physically situated in the location where one's body is; and Agency, which involves having the capability to move and sense one's own body independently. According to Johnson-Glenberg (2018), embodiment is an integral part of learning in VR.

Howard et al. (2021) introduce another critical element of immersion and presence in VR: task-technology fit. It refers to "the degree to which a technology assists an individual in performing his or her portfolio of tasks" (Goodhue & Thompson, 1995, p. 216). To put it simply, it is a match between user characteristics, task requirements, and technology characteristics. A meta-analysis of virtual reality training programmes has demonstrated a strong influence of task-technology fit on overall user satisfaction and VR training success (Howard et al., 2021).

To sum up, immersion, sense of presence, and embodiment provide realistic settings for training activities. Carruth (2017) argues that the immersion and sense of

presence offered by VR applications hold significant promise for providing training within a safe and controlled environment. VR learning environments can grant access to expensive equipment and simulated locations, allowing trainees to explore problems and test solutions without risk. In the context of the events industry, for example, employees can experience realistic scenarios such as emergency evacuation, fire training, and conflict resolution. Conducting emergency drills often involves high costs, which makes some organisations hesitant to implement them. Typically, these drills are limited in scope and focus on common rather than rare scenarios, restricting the crisis team's ability to explore innovative crisis management methods (Kwok et al., 2019).

Constructivist and Experiential Learning in VR

Two relatively similar theoretical perspectives have guided this research, namely constructivist learning and experiential learning theories. Constructivist learning theory focuses on the merging of sensory input with existing knowledge, which leads to new meaning construction and understanding through active and reflective learning activities (Jonassen et al., 2000). This theory supports a learner-centred approach where the learner's pace is controlled by the learner. Lin and Hsieh (2001) argue that individuals learn better if they discover things on their own via interaction with the learning environment instead of being guided and instructed. In turn, a self-directed interactive learning experience could lead to better outcomes, including higher trainee performance and satisfaction (Zhang et al., 2006). According to Kirschner et al. (2006), constructivism guides a variety of active learning approaches, including problem-based learning, inquiry learning, and experiential learning.

INTERPERSONAL SKILLS TRAINING IN VIRTUAL REALITY

Experiential learning is defined as a process whereby "knowledge results from the combination of grasping and transforming experience" (Kolb, 1984, p. 41). This view is grounded in pragmatism, a paradigm which emphasises the primary role of a learner's experience in experiential learning settings. Drawing on the previous theorisation of Dewey (1938), who argued that any subject matter could not be learned in isolation and that knowledge is instrumental and is always concerned with the conditions and consequences of human experience, Kolb (1984) proposes an experiential learning cycle. It is composed of four different stages, including concrete experience, reflective observation, abstract conceptualisation, and active experimentation. According to Kolb (1984), the learning cycle can be entered at any point, but all stages must be followed in sequence if the objective is to successfully learn a new skill or obtain knowledge.

Supporting both constructivist and experiential learning arguments, VR applications provide a three-dimensional representation involving visual, auditory, tactile, and kinaesthetic dimensions (Khandelwal & Upadhyay, 2019). VR training involves higher levels of interaction compared to other formats and allows trainees to be flexible and actively involved in the process of learning at their own pace in a safe, immersive environment (Leung et al., 2022).

Dalgarno and Lee (2010) identify several key benefits of VR training. These include enhanced spatial knowledge representation, as VR offers an improved understanding of spatial relationships and environments. The authors also highlight the opportunities for experiential learning, allowing learners to engage in hands-on immersive experiences that replicate real-world scenarios. Additionally, VR training boosts motivation and engagement due to its immersive nature, offering a more interactive and engaging experience compared to traditional 2-D alternatives. This

heightened immersion encourages learners to actively participate in the learning process.

Research Methodology

This research is of a qualitative nature. For VR training, it helps to explore and understand an individual's experiences to enable better support for the "transfer of training" (Xie et al., 2021, p. 13), which includes relevant knowledge, competences, skills, and abilities required to perform job activities (Burke & Hutchins, 2007). Rather than checking the usability of VR technology, the focus of data collection and analysis was on the users' rationale, insights from practice, and challenges.

Research paradigm and methods

The philosophical foundation of this research aligns with pragmatism, which is "concerned with action and change and the interplay between knowledge and action" (Goldkuhl, 2012, p. 136). According to pragmatism, knowledge is inherently a social phenomenon when 'social' is understood as 'interactive' (Longino, 2002). Through interaction, individuals collectively develop and share knowledge, making it a collaborative product (Greenwood, 1991). To acquire knowledge, action is essential. Additionally, thought and reflection are crucial components. The integration of these elements—action, thinking, and reflection—facilitates the creation of knowledge (Biesta, 2010).

Pragmatist knowledge is inherently partial and influenced by the knower's geographical location, historical context, and perspective shaped by specific knowledge production practices. Knowledge claims remain open to challenge and revision; their validity is assumed until unresolved problems necessitate re-evaluation (Berger & Luckmann, 1967). Consequently, knowledge is perpetually evolving in response to new experiences and is always in a process of becoming

(Jackson, 2013). The objective of pragmatist research is to emphasise action-oriented approaches and serve as a resource for informing human practices, suggesting solutions to tangible social problems (Powell, 2001). This research utilises a pragmatist epistemology to first understand what learners experience during training sessions in VR and secondly to use that understanding to inform and improve the efficiency, engagement, and outcomes of VR training in the field of event management.

Suggesting an alternative to quantitative expectations of generalisability, validity, and reliability, this research focuses on rhizomatic conceptualisations (Deleuze & Guattari, 1987) applying a combination of thematic analysis and Creative Analytical Practice (CAP) in the form of vignettes. Following a pragmatist stance, the rhizomatic paradigm in research allows for multiple intersecting lines of inquiry and the inclusion of diverse perspectives. Research informed by this paradigm is non-linear and open-ended. It emphasises connections, heterogeneity, fluidity, and constant “evo/revolution” (Strom & Martin, 2013, p. 220). In other words, the purpose of the data analysis in this study was not to ‘capture reality’ and provide evidence of the effectiveness or ineffectiveness of VR training for educational and professional purposes, but to represent diverse experiences in a way which combines creativity with analytical rigour. One of these ways is CAP, a method which involves creative techniques (poetry, narrative writing, performance) to produce more nuanced, expressive, and engaging representations of research findings (Berbary, 2019). Whereas traditional thematic analysis includes a theme/interpretation/evidence structure which tends to reveal researcher objectivity, reduce data to discrete categories, and is written in a detached academic voice (Berbary, 2019; Patton, 2002), CAP offers a more participant-focused way of data interpretation and

illustrates the complexity of the subject matter. More importantly, CAP enables researchers to present the results of their inquiry in a manner that is more accessible to a wider non-academic community. As it was central to this research to bring forth "the polyphony of voices and variations of interpretations" (Tomej & Duedahl, 2023, p. 4), a form of vignette was adapted to represent the data collected. A vignette is a short story which presents a situation or a person (Alexander & Becker, 1978) or a vivid account of practice (Angelides & Gibbs, 2006). In this research, both CAP and thematic analysis have been employed to guarantee a robust analysis strategy which includes all nuances of data analysis and discussion.

Research context

A VR module, *"Customer Experience - Improving Customer Service in Difficult Situations"*, was developed by Bodyswaps, a provider of immersive AI-driven simulations for training purposes. This module focuses on enhancing participants' skills in managing customer interactions, particularly in challenging or high-stress situations typical in the visitor economy sector. The VR training experience simulates a virtual environment where participants interact with AI-driven avatars that act as customers, presenting a range of scenarios designed to mirror real-world challenges.

The key learning objectives of the module include:

- Understanding the emotional impact of customer service on clients.
- Practising active listening and de-escalation techniques during interactions with dissatisfied customers.
- Recognising the effects of different communication styles and strategies on customer satisfaction (Bodyswaps, 2024).

In the session, participants were presented with an upset client at a train station seeking assistance due to a cancelled train. The scenario was designed to simulate a challenging, high-pressure interaction typical of the customer service sector.

In the first part of the module, participants observed a communication exchange between a virtual passenger and a virtual member of staff. Using a virtual touchpad, they were tasked with identifying examples of professional and unprofessional behaviour demonstrated by the staff member. This phase aimed to enhance participants' ability to critically assess communication styles and customer service practices.

In the second part of the module, participants were invited to engage in the interaction and manage the difficult situation that arose due to the unprofessional behaviour of the virtual staff member. They were required to address the passenger's concerns effectively, ensuring that their language, tone, and gestures were appropriate and professional. This phase provided an opportunity to practise real-time problem-solving and communication skills in a controlled yet realistic environment.

In the final section, the AI-powered system evaluated participants' responses based on their choice of words, tone of voice, and physical gestures. Instant, personalised feedback was provided, enabling participants to reflect on and improve their performance.

The choice of a train station customer service scenario as the basis for this research stems from the fundamental similarities between service-oriented interactions across various industries. While the setting itself is not event specific, the core competencies being developed—such as effective communication, conflict resolution, emotional intelligence, and handling high-pressure situations—are directly

transferable to event management contexts. Event professionals frequently engage with attendees who require information, assistance, and problem-solving, mirroring the dynamics of customer service in transport hubs. Additionally, given the current lack of VR simulations tailored specifically for event management training, this study leveraged an existing, immersive training module to explore the broader applicability of VR in developing interpersonal skills. This approach serves as an important step in demonstrating the potential of VR for experiential learning in events education, reinforcing the need for more industry-specific VR training tools.

The VR sessions for this research were conducted using standalone Oculus Quest 2 VR headsets equipped with integrated audio and motion tracking capabilities. Each participant wore a headset that provided a 360-degree immersive view of the virtual environment, allowing them to look around and interact as if they were present in a real-life physical customer service setting. The headsets featured built-in microphones, enabling participants to communicate with the virtual avatars using natural language. The VR system tracked the participants' head movements, allowing them to make eye contact with the avatars and observe their body language, further enhancing the authenticity and realism of the interaction.

Sampling

The study involved a purposive sampling method to recruit 10 participants, consisting of eight students enrolled in a BA (Hons) Event Management programme and two academic staff members (see Table 1).

<<<INSERT TABLE 1 HERE>>>

The rationale behind selecting students and staff was to leverage their dual perspectives on both learning and professional application. Individual VR sessions were scheduled according to the agreed protocol, which included a 5-minute

induction, a 15-minute VR experience, and a 35–40-minute verbal self-reflections after the session. This method provided the participants with an opportunity to "reflect more deeply about their training experiences through probing" (Xie et al., 2021, p. 13). The reflections were about how the VR training session affected the participants, what insights were generated, how the participants could apply the obtained knowledge in real life, and what discomfort, if any, they experienced.

Although the sample size is relatively small, it aligns with the objectives of qualitative research, which emphasise exploring in-depth insights and achieving data saturation, particularly in studies focused on individual experiences rather than generalisation. According to Hennink and Kaiser (2022), data saturation in qualitative research can typically be achieved with sample sizes ranging from 9 to 17 interviews. The participants were purposefully selected to ensure a degree of similarity in their professional context and exposure to VR training, which facilitated the early emergence of consistent themes. Homogeneous samples typically require fewer participants to achieve saturation compared to more heterogeneous groups (Guest et al., 2006).

The depth of the collected data enabled a thorough exploration of the topic, providing valuable insights contributing to a comprehensive understanding of the phenomenon. Individuals who suffered from motion sickness or had previous health issues related to VR were excluded to avoid exacerbating symptoms and causing distress. Prioritising participants' well-being and safety was essential, which included avoiding situations that could cause negative experiences.

Data analysis strategy

All self-reflections were audio recorded and transcribed verbatim. A three-phase procedure of the thematic analysis was employed by both researchers

independently. This includes 1) Familiarising with the data; 2) Generating codes and themes; and 3) Reviewing themes. The data analysis is not a linear process of moving from one stage to another. Thus, the researchers experienced back and forth movements through the stages (Braun & Clarke, 2006). The identified codes and initial themes were then compared and categorised. As a result, several repeating aspects of training in VR were identified (See Table 2).

<<<INSERT TABLE 2 HERE>>>

After the aspects of the experience were established, a research vignette was developed based on all ten self-reflections. Two fictional characters, Mary and Anna, were created. Mary's persona encompasses all positive aspects of the participants' experience of VR training, whereas Anna's persona accumulates all the negative elements of VR experience. The application of CAP allows presenting the results of the analysis in a compact but holistic way. The following sections introduce the research vignette and provide its discussion.

Research Vignette

Mary and Anna have not had much experience with VR and do not know what to expect from the VR trial session. They go in "blind and fresh." After completing the module, Mary feels quite overwhelmed by how immersive and interactive it is. She is very impressed and becomes fully engaged with the training narrative. Once she is in the virtual world and looking around, it all feels like she is truly there. She completely leaves the real world behind and feels fully immersed in the characters and tasks.

Anna, however, is a bit sceptical. She feels that her lack of experience with VR limits her trial session, as she focuses more on the technology and its navigation system rather than the training itself. She also experiences mild symptoms of cyber

sickness. The headset feels somewhat heavy with a difficult-to-adjust strap. She thinks this discomfort is partly because she is new to VR and did not know what to expect. She is relieved when the trial ends and she takes off the headset, feeling a bit too warm, which contributes to her motion sickness and tiredness. Sometimes, the graphics appear blurry, and she encounters issues with the sensitivity of the controls.

Mary finds the module useful. “If you fail with a scenario,” she says, “you can try again, see options, and have examples.” She follows the scenario involving a heated employee-customer interaction, learning from both correct and incorrect responses. At one point, she intentionally chooses a wrong answer to see what would happen and learns from the experience.

Anna believes she learns better in more real-life situations rather than in pre-determined structured scenarios. She adds, “The computer decides whether you are right or wrong, and that might not always apply to every situation you could encounter in the real world.”

Mary finds the VR trial helpful for training in customer interactions. She has worked in customer service for a long time and explains that employers do not always prepare you for the variety of customers you may encounter. VR training offers a first-hand experience, teaching you how to manage customers who may be unhappy or frustrated. She adds, “It gives you the opportunity to test out your customer service skills in a safe environment, so you feel more confident before you enter the real environment.” Mary believes that VR training can be a valuable tool for newly employed staff as it offers basic training in transferable skills, with the chance to fail and learn from those failures.

Mary is particularly impressed with the instant feedback she receives on how she responds to a virtual customer, including the tone of her voice, the language she uses, and her body posture and gestures. She now understands how positive body language and careful word choice can help de-escalate a situation with an unhappy client.

Learning Experience in VR: Discussion

The presented vignette illustrates the interplay between two key themes that emerged from the analysis: *Immersion and Cognition* and *Instant Feedback and Reflection*. These themes capture the full spectrum of trainee interactions both with and within the VR environment. *Immersion and Cognition* highlights how participants mentally engage with and process the VR scenarios, while *Instant Feedback and Reflection* focuses on how the immediate responses within the VR system enable participants to reflect on their actions and adjust their strategies in real time. Together, these themes provide a comprehensive understanding of how trainees interact, learn, and adapt through VR training.

Several factors contributed to the immersive experience of the VR module, including the realism of the virtual environment, sensory immersion, and emotional connection. The realistic nature of the VR training module with its multisensory nature and interactivity played a crucial role in engaging the participants, heightening their enjoyment and curiosity. These results support Lui and Goel's (2022) findings about the effect of the virtual training space, including visual, haptic, audio, and textual information on learners' engagement with the tasks and improved learning outcomes. Immersive 3D representations help to create a better sense of presence (Heeter, 1992) with multiple frames of reference (Erickson, 1993), which enables space exploration from various perspectives and points of view. Embodied

interaction, whereby participants felt connected with their virtual avatars, has also contributed to the sense of presence of “being there” and experiencing in real time. Johnson-Glenberg (2018) proves that when learners perform actions and can manipulate content during learning in VR, they demonstrate better results in learning, for example, abstract concepts in comparison to more passive modes of learning.

It is important to note that most participants had little previous experience with VR (See Table 1). In this situation, novelty positively affected the overall experience, increasing motivation (Freina & Ott, 2015) and prompting learners to invest additional mental resources into the training activities in VR (Howard et al., 2021). However, as the vignette demonstrates, a lack of practical experience with VR may lead to frustration and demotivate a trainee to continue completing the module.

The cognitive dimension is equally important in this context, as it relates to how participants processed, understood, and learned from the VR experience. Cognitive engagement involves the active mental effort participants put into analysing virtual scenarios presented to them and making appropriate decisions based on understanding and empathy (Żuromski et al., 2018). Slater and Sanchez-Vives (2016) argue that VR trainees, when placed in scenarios that depict potentially real events, would act and respond to challenges realistically. As participants navigated realistic virtual customer scenarios, they needed to think critically about their responses and evaluate the outcomes of their actions. Mary’s narrative in the vignette demonstrates that the cognitive aspect is essential for developing decision-making and problem-solving skills, as it helps internalise the training content and apply it to similar real-world situations.

One of the benefits of training in VR is the opportunity to receive instant feedback and reflect on one's performance. The ability to interact with virtual avatars

in a contextualised environment, as well as seeing the impact of their actions in real time, made the experience of participants more compelling and relatable and helped the learners stay engaged and focused on the tasks and learning objectives. The VR scenario involved dealing with an unsatisfied client, which not only creates an emotional connection and empathy for the participants but also encourages deep reflection on their actions and reactions during the training. The scenario provided trainees with the opportunity to test their customer service skills in a safe environment with a chance to fail and learn from this failure. VR training modules which allow or even encourage learners to make mistakes often produce better outcomes as they enable users to understand which behaviours can lead to mistakes and the detrimental outcomes of these mistakes (Carter & Beier, 2010; Howard et al., 2021). The real time feedback loop allows participants to make corrections on the spot and understand the consequences of their actions, which is crucial for effective learning and skill development.

Reflection played a crucial role in the VR scenario by allowing participants to critically evaluate their performance after receiving immediate feedback. This finding is in line with Kolb's (1984) experiential learning theory. It includes reflective observations when a learner can reflect on and observe their behaviour and experiences from multiple perspectives. In this research, reflective observations involved considering what went well, what could have been done differently, and how their behaviour influenced the outcomes of the interaction with the virtual customer. For instance, participants reflected on how their choice of words or tone affected the virtual customer's response, prompting them to think about potential alternative approaches they could use in similar real-world situations. This reflection helped to

absorb the feedback received during the session, reinforcing the learning and enabling participants to adjust their strategies in future interactions.

The VR experience was not without its challenges and limitations. Common issues identified in this research include physical discomfort from the headsets, cyber or motion sickness, occasional low sensitivity of controls, and blurriness of graphics. These findings are in line with previous research. Thus, side effects such as headaches, eyestrain, nauseated feeling, vomiting, dizziness, and cold sweats have been registered among VR users (Chattha et al., 2020). Marougkas et al. (2023), in their discussion of the current limitations of VR devices, emphasise a negative impact of the proximity of VR lenses to the users' eyes, which typically requires a fixed focus at a specific distance for a relatively long duration. This can result in a noticeable difference between the natural visual experience and the experience in VR, affecting the levels of immersion and presence, and impacting the overall health of the user. A mismatch between the visual, vestibular, and proprioceptive systems may lead to loss of balance or a feeling of nausea, which contributes to motion sickness (Chang et al., 2020).

Consistent with Frehlich's (2020) observation that VR can support immersive and engaging learning experiences, this research provides some evidence of VR's potential to enhance certain aspects of skill training. The study identified advantages of VR training applications, such as flexibility, opportunities for self-reflection, and increased confidence among participants. These findings align with constructivist and experiential learning theories, which suggest that a learner-centred, self-guided approach may contribute to improved learning, knowledge retention, and confidence. The results indicate that the immersive nature of VR can promote higher levels of engagement and information processing, with reinforcement mechanisms like

interactivity and instant feedback influencing trainees' behavioural responses and skill acquisition.

Conclusion

The purpose of this study was to explore the use of VR in training interpersonal skills for event management profession. Through the qualitative presentation and analysis of the data, an interplay of two critical elements has been revealed, namely Immersion and Cognition, and Instant Feedback and Reflection. Immersion and Cognition captures the emotional and embodied perspective of the training experience in VR. As the analysis and discussion of the findings demonstrate, VR training modules provide an interactive synthetic environment which offers trainees an immersive experience and engages both their mind and body in the learning process. Instant Feedback and Reflection create a skill development loop where trainees are encouraged to continuously reflect on the presented virtual circumstances and situations and learn by observing virtual avatar reactions to their actions and adjusting them accordingly to achieve better outcomes.

Several factors affect the quality of this interplay. As the research demonstrates, the novelty of the VR experience may have both positive and negative impacts on the overall trainee satisfaction. From a positive perspective, it provides excitement and a desire to explore; however, a lack of VR navigation skills may cause confusion and an intention to withdraw from the VR session. On the one hand, the immersive nature of VR training fully engages the body and mind of a learner; on the other hand, it may lead to cyber sickness and cause headaches and dizziness. The computer-controlled feedback may provide useful insights and motivate trainees to explore the consequences of their actions and decisions. However, some learners may question the applicability of the provided feedback in real-life circumstances.

Several practical implications for integrating VR in student and staff training emerge from the discussion of the research findings. VR's ability to provide immersive and engaging training environments can improve the learning experience. Training programmes should leverage VR to create realistic scenarios that fully engage trainees, minimising distractions and enhancing focus and retention of information. This approach can lead to better preparedness and confidence in handling real-life situations. Incorporating VR modules that offer instant feedback on performance allows trainees to quickly understand the impact of their actions and make necessary adjustments. This immediate reflection and correction process can enhance skill acquisition and behavioural adjustments.

As indicated in the Methodology section, the focus of this project was on exploring individual perceptions, opinions, and doubts rather than conducting subjectivist research for generalisation purposes. Although the sample size in this research was limited, the analysis has provided valuable first-hand insights into the potential of event management training in VR and established a foundation for further exploration of VR task-technology fit, aspects of immersive cognition, feedback and reflection loop, and overall applicability of constructivist and experiential learning theories in virtual environments.

The data and observations from a limited number of participants emphasise the potential of utilising VR for learning purposes, as it has the capacity to equip individuals with the necessary confidence, expertise, and adaptable skills essential for addressing professional obstacles. Future research, however, may focus on a larger population and utilise quantitative methods to identify, for example, patterns in cognitive behaviour of trainees, level of knowledge retention, or applicability of obtained skills in real-life contexts. The accessibility of the VR experience has been

outside the scope of this research. Future research could explore this aspect, focusing not only on the accessibility of VR technology but also on the accessibility of the VR experience.

This study highlights the potential of VR as a tool for immersive and interactive interpersonal skills training, yet it also underscores the gap in events-specific VR simulations. While the customer service scenario used in this research successfully facilitated skill development relevant to event professionals, the findings suggest a strong need for the development of VR training modules tailored explicitly to the complexities of event management. Future research and industry collaborations should focus on designing VR simulations that replicate real-world event scenarios, such as managing guest interactions, coordinating teams on site, or responding to event disruptions. By advancing VR technology in this direction, event education can further benefit from the experiential advantages that virtual training provides.

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Table 1: Research participants

Participant	Gender	Age	Experience with VR
Participant 1	Male	Over 25	"Not a lot of experience with VR, only experienced it a couple of times"
Participant 2	Female	Over 25	"Never had any experiences with VR"
Participant 3	Female	Over 25	"Never used VR before"
Participant 4	Female	Under 25	"Had some experience using VR, but never for learning purposes, only for 'fun' entertainment purposes"
Participant 5	Female	Over 25	"Used several times before"
Participant 6	Male	Over 30	"Had one prior experience with VR"
Participant 7	Female	Over 25	"Had not experienced VR before"
Participant 8	Male	Under 25	"Used VR before, but never for learning purposes"
Participant 9	Female	Under 25	"Used VR before"
Participant 10	Female	Over 25	"Experience before, but found prior experiences glitchy"

Table 2. Repeating aspects

Aspects	Examples
Immersive nature and realism	"I completely left the real world behind. So, I felt fully immersed with the characteristics and what I was".
Enhancing learning outcomes	"I would say this helped me improve or understand what the best way of speaking with a customer or a guest in a stressful situation is".
Feedback/reflection	"When you watch yourself back and how you stand, present yourself, it was unprofessional, considering it was meant to be customer service".