

Evaluating the perceived effectiveness of face-to-face versus technology-based training on employee performance



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Orientation: The COVID-19 pandemic accelerated global adoption of technology-based training (TBT), compelling organisations to embrace digital learning solutions. While this transition offered flexibility, effectiveness depends on employee perceptions, with many preferring face-to-face training (F2FT). This study investigates whether South African organisations can transition to TBT while maintaining performance.

Research purpose: This research evaluates the perceived effectiveness of TBT compared to traditional F2FT approaches in South African organisational contexts. By identifying optimal training methods across employee segments, it provides evidence-based guidance for organisations transitioning from conventional to technology-based delivery.

Motivation for the study: Following COVID-19's enforced digital transition, organisations have invested heavily in learning technologies without a robust evidence base. Evidence on performance outcomes and employee acceptance is vital for HR decision-makers navigating South Africa's distinctive socio-economic context, characterised by unequal digital access and a diverse workforce.

Research approach/design and method: This qualitative study employed thematic analysis to examine training preferences in the financial industry. Using purposive sampling, 12 financial sales advisers from the Western Cape participated in semi-structured interviews exploring experiences across different training modalities.

Main findings: Analysis revealed perceived benefits across both delivery methods; however, F2FT emerged as the predominantly preferred approach, valued for its interactivity, real-time feedback and structured learning environment.

Practical/managerial implications: These findings enable organisations to make informed decisions about training approaches, allowing HR professionals to design more effective development programmes that enhance employee performance and productivity.

Contribution/value-add: This research offers actionable insights for training professionals and organisational leaders, informing evidence-based decisions about optimal training delivery within South African corporate contexts.

Keywords: face-to-face training; technology-based training; training method; training effectiveness; employee performance; training and development.

Introduction

In an era of rapid technological advancement and global disruption, organisations are under increasing pressure to remain productive, competitive and adaptable (Madaan & Bhatnagar, 2021; Saha, 2017). Employee competence – rooted in knowledge, skills and abilities (KSA) – is central to achieving organisational effectiveness (Adamu et al., 2022; Rodriguez & Walter, 2017). As such, training and development (T&D) has become a strategic function within human resource management (HRM), aimed at enabling and empowering the workforce to perform effectively (Mehale et al., 2021; Samwel, 2018; Thomas, 2024). The significance of T&D was magnified during the COVID-19 pandemic, when remote work policies were rapidly implemented, disrupting traditional workflows and face-to-face interactions (Kurdy et al., 2023; Mikołajczyk, 2022). Although many South African organisations had limited prior experience with remote work (Nkate, 2020), the shift necessitated immediate upskilling in digital collaboration tools, virtual meeting platforms and cloud-based systems (Saurombe et al., 2022; Shirmohammadi et al., 2022). In this context, T&D played a pivotal role in bridging the gap between remote work demands and

employee performance (Bloom, 2024; Pandey et al., 2023). In South Africa, skills development is also shaped by a historical imperative to redress the inequalities of the past. The *Skills Development Act (97 of 1998, as amended)* was introduced to promote workplace learning and reduce skills shortages, poverty and unemployment (Rykliet & Tengeh, 2022). Together with related legislation, it forms a foundation for T&D as a national priority.

Despite the widespread implementation of T&D, questions persist regarding its effectiveness – particularly the method of delivery. Research suggests that training format can influence employee engagement, satisfaction and perceived value (Abdulhabib & Al-Dhaafri, 2020; Ajayi & Chioma, 2024; Bell et al., 2017). While some argue that technology-based training (TBT) offers cost-effectiveness and scalability, others highlight the continued relevance of face-to-face training (F2FT), especially for skill application and interaction (Clapper & Greyling, 2022; Kim, 2022; Žur & Friedl, 2021). This study measures perceived effectiveness through employee self-reported assessments of learning outcomes and anticipated performance improvement, examining whether training delivery mode (F2FT vs. TBT) is associated with differences in these perceptions. Given the growing reliance on digital tools in the workplace, this study aims to compare the perceived effectiveness of TBT and F2FT in improving employee performance. Understanding employees' experiences and preferences is critical for designing impactful T&D strategies in a post-pandemic workforce.

Research purpose

Organisations continue to invest substantial resources in T&D initiatives with the goal of enhancing workforce productivity and performance (Beinicke & Bipp, 2018; Jevana, 2017; Nguyen & Nguyen, 2024). However, the effectiveness of these interventions is often influenced by the chosen training delivery method. Traditionally, F2FT has been the dominant approach, but the rise of TBT – particularly post-COVID-19 – has sparked renewed debate about the comparative efficacy of both methods (Akpoiroro & Adeleke, 2022; Mikołajczyk, 2022; Žur & Friedl, 2021).

The exploration of TBT as a potential replacement for F2FT is motivated by several organisational realities: Firstly, organisations face increasing pressure to reduce training costs associated with venue rental, travel, instructor time and employee time away from work (Koirewoa et al., 2024). Secondly, the need for scalable training solutions has intensified as organisations expand globally with geographically dispersed workforces (Charitonos et al., 2024). Thirdly, the COVID-19 pandemic accelerated digital transformation and demonstrated that remote learning modalities could maintain business continuity when F2FT was impossible (Maphalala & Ajani, 2023). Fourthly, technological advances in learning management systems, virtual reality and interactive platforms have enhanced TBT's pedagogical capabilities (Serrat, 2017). However, whether

these practical advantages translate into perceived effectiveness from the employee perspective – and whether TBT can genuinely substitute for the interpersonal, hands-on elements of F2FT – remains an empirical question requiring investigation.

While existing literature outlines the strengths of both F2FT and TBT, direct comparisons remain limited, especially within the South African context. The pandemic-induced shift to remote work has further highlighted the need to understand how employees perceive TBT in contrast to traditional methods (Chikandiwa et al., 2024; Mhlanga & Moloi, 2020; Rigolizzo, 2022). Given the infrastructure and accessibility challenges faced by many South African organisations, it is unclear whether TBT can universally replace F2FT. This study therefore aims to explore employees' perceived effectiveness of TBT compared to F2FT, with a focus on its impact on upskilling and workplace performance. By capturing employee feedback, the research seeks to offer practical insights to help organisations select training methods that align with their operational realities and workforce needs. Based on this, the following research question was formulated: What are employees' perceptions of the effectiveness of TBT compared to traditional F2FT training to improve their workplace performance?

The following research questions guided the study:

- Do employees perceive F2FT as an effective method to be upskilled and improve their workplace performance?
- Do employees perceive TBT as more effective than the traditional F2FT method to upskill and improve their workplace performance?
- Do employees perceive TBT as a viable alternative to F2FT, and under what circumstances might one mode be preferred over the other?

Literature review

Several training evaluation frameworks exist, including Kirkpatrick's five-level model (Kirkpatrick & Kirkpatrick, 2016) and Phillips's return-on-investment (ROI) model (Phillips, 2012). However, Kaufman's five-level evaluation model extends these approaches by linking individual learning outcomes to broader organisational and societal impacts, offering a more holistic framework suited to this study's objectives (Tripathi & Bansal, 2017). Kaufman's focus on inputs, processes and results also complements Bloom's taxonomy, facilitating evaluation of both cognitive and affective learning outcomes (Cedefop, 2017; Hoque, 2016). Accordingly, this study draws on Kaufman's model to assess training effectiveness from learner reactions to organisational impact while integrating Bloom's affective (receiving, responding) and cognitive (understanding, applying) domains to capture learner engagement and participation. Together, these models provide a robust theoretical foundation for examining not only objective outcomes but also learners' perceptions of training effectiveness, thereby bridging a conceptual gap between individual learning experience and organisational performance.

Comparisons between face-to-face and technology-based training

Research on the comparative effectiveness of F2FT versus TBT yields mixed results. Some studies highlight TBT's flexibility, scalability and cost-effectiveness, especially in digital-era workplaces (Akpoiroro & Adeleke, 2022; Li, 2022; Psicosmart Pro, 2023; Žur & Friedl, 2021). Conversely, traditional F2FT remains valued for its interpersonal interaction and hands-on learning opportunities, often leading to higher learner satisfaction and motivation (Aspeling & Mason, 2020; Martins et al., 2019; Maxwell, 2018). Importantly, research suggests that these outcomes are influenced not only by the training method itself but also by employee perceptions and preferences, which significantly impact engagement and transfer of learning (Jevana, 2017; Nguyen & Nguyen, 2024). The COVID-19 pandemic accelerated the adoption of TBT, compelling organisations and employees to adapt rapidly. However, challenges such as the need for greater learner self-regulation and digital literacy have surfaced, affecting perceived effectiveness among some groups (Martins et al., 2019; Mhlanga & Moloi, 2020). Within the South African context, where digital infrastructure and skills vary, these perceptions are particularly critical to understand (The National Skills Authority of South Africa, 2023).

Blended training as a middle ground

Blended training, combining F2FT and TBT methods, has emerged as a promising approach that leverages the strengths of both (Batista-Toledo & Gavilan, 2022; Singh et al., 2021). It offers flexibility and accessibility through technology while maintaining the social interaction and immediate feedback of face-to-face sessions (Hewett et al., 2019). This hybrid approach can improve learner engagement and accommodate diverse preferences, facilitating smoother transitions to digital learning environments (Alsalamah & Callinan, 2021). Despite these advantages, blended training demands higher design complexity and resource investment, which can influence perceptions of workload and intensity (Abudlhabib & Al-Dhaafri, 2020; Alvarez, 2020; Van Leeuwen & De Bruin, 2023).

Training effectiveness and perception

Training effectiveness traditionally refers to the extent to which learning objectives are met and applied in the workplace, resulting in improved performance (Kirkpatrick & Kirkpatrick, 2016; Zhou & Xie, 2024). Crucially, perceived effectiveness – how employees evaluate and feel about the training – is a key factor influencing motivation and knowledge transfer (Martins et al., 2019; Sheeba & Christopher, 2020). Effective human resource development (HRD) requires a systematic approach, including needs analysis, supportive environments and continuous evaluation to ensure alignment with organisational goals (Aboyasin & Sultan, 2017; Farouk, 2022). This study adopts a multi-level evaluation approach, assessing training across

input (learner reactions), acquisition (knowledge gain), application (behavioural change), organisational payoff (performance improvement) and societal contributions (client and community impact). By focusing on employee perceptions within this framework, the study seeks to illuminate which training delivery method – F2FT or TBT – is perceived as most effective in enhancing workplace performance.

Research design

Research approach

An interpretative phenomenological analysis (IPA) design was selected to align with the qualitative approach and research objectives. This design enabled in-depth exploration of participants' subjective experiences and meaning-making processes. Semi-structured interviews were utilised to capture participants' detailed experiences and perceptions of both F2FT and TBT, as well as their perceived effects on workplace performance.

Sampling and participants

The sample comprised 12 financial sales advisers from a South African financial insurance and investment company with branches nationwide and headquarters in the Western Cape. The target population focused on Western Cape employees who joined before 2020, ensuring experience with both face-to-face and TBT methods. Participants were selected using non-probability purposive sampling based on these specific criteria.

Data collection procedure

All interviews were conducted via Microsoft Teams because of its established organisational use and accessibility. Following informed consent, interviews were recorded using Teams' integrated capabilities. Participants were briefed on the study's purpose with opportunities for questions, creating a comfortable environment for open discussion. Interview duration ranged from 30 min to 60 min.

Measuring instruments

Interviews were guided by a structured interview schedule comprising 12 primary questions with follow-up probes. The questions were developed based on the research objectives and theoretical framework identified in the literature review to ensure logical coherence. Sample questions included: 'Describe your experience with F2FT. What did you enjoy about it, and what was challenging?' and 'Which training method enabled you to effectively transfer your acquired knowledge, skills, and attitudes back into your job?' A standardised interview process was followed with all participants to enhance reliability and validity. Following completion of each interview, recordings were transcribed using Microsoft Teams' automated transcription feature, supplemented by manual verification to ensure accuracy.

Data analysis

Thematic analysis was employed as the analytical framework, following Braun and Clarke's (2006) systematic approach to identifying, analysing and describing patterns or themes within qualitative datasets. This analytical method has gained prominence in qualitative research because of its effectiveness in capturing participants' perspectives, experiences and understandings of particular phenomena (Braun & Clarke, 2006). The compatibility between thematic analysis and IPA made this approach particularly suitable for exploring participants' subjective experiences and meaning-making processes related to training methods.

Ethical considerations

Ethical clearance to conduct this study was obtained from the University of the Western Cape Humanities and Social Science Research Ethics Committee (Ref. No. HS22/10/5). Written informed consent was obtained from all participants, with voluntary participation ensured. Participant identities and contributions also remained anonymous and confidential. Interview transcripts and recordings are password-protected and accessible only to researchers. Recording permission was also requested before each interview.

Results

Based on the data findings, the researcher uncovered and identified themes and sub-themes. These themes have emerged:

- F2FT experience
- TBT experience
- Employee performance impacts
- Training preferences

Each theme emerging from the data findings also includes and expands into several sub-themes. This is displayed in Table 1.

Theme 1: Face-to-face training experience

All participants confirmed that F2FT was their main training method before the COVID-19 pandemic. They shared both positive and challenging aspects of their experiences,

TABLE 1: Themes and sub-themes.

Themes	Sub-themes
Theme 1: Face-to-face training experience	1.1 Human interaction and guidance 1.2 Customary 1.3 Away-from-job training
Theme 2: Technology-based training experience	2.1 Flexible training environment 2.2 Connectivity challenges 2.3 Remote learning challenges 2.4 Adapting to technology and age
Theme 3: Impact on employee performance	3.1 The impact of COVID-19 3.2 Motivation to learn 3.3 Behavioural shift post-training
Theme 4: Training preferences	4.1 Facilitator experience 4.2 The future of training 4.3 Preferred training method

including classroom sessions and manager-led coaching. The sub-themes presented in this section further explore these experiences.

Sub-theme 1.1: Human interaction and guidance

A common positive experience among participants was the ease of human interaction that F2FT provided. They appreciated the ability to engage directly with facilitators and peers, ask questions and receive immediate feedback. Additionally, observing body language and facial expressions enhanced communication and understanding. The following responses illustrate these perspectives:

'In face-to-face training, as a team, as a group, as colleagues, you encourage each other. You can see how each one develops, so I would say that is the pro, We have to interact with people ... you need to have human interaction.' (Participant 1, female, 21–30 years old)

'In a classroom environment, you can feed off your peers and maybe their reactions to certain questions. You could kind of learn what other people do and say and how they react in terms of their body language to get the point across.' (Participant 5, male; 31–40 years old)

'You're looking at the person that is facilitating and you are able to stop the person immediately and everyone can see that you have a question to ask.' (Participant 12, female; 31–40 years old)

This aligns with Timmermans and Van den Bosch (2024) who highlight that one of F2FT's key advantages is the ability to foster direct interaction and engagement between trainees and facilitators. The face-to-face setting enhances communication through visible body language and facial expressions, promoting better understanding and collaboration. Kim (2022) and Lewis (2006) further support the value of human interaction, noting its role in improving engagement with content, facilitating group dynamics and enhancing problem-solving. Participants echoed these benefits, emphasising their appreciation for the opportunity to ask questions, receive immediate feedback and engage with both facilitators and peers. Participants 3 and 5 specifically mentioned enjoying the facilitator's enthusiasm during the sessions:

'Face-to-face, I would say. When we got inducted into [the company] and the training, our trainer at that time made it very interactive. She kind of enforced that ... So, for me, in terms of training, she changed everything about training and when you go to other training sessions, you can guide that session with your questions that you're asking based on how you have been brought into the business which is very important.' (Participant 3, male; 31–40 years old)

'I enjoy face-to-face training because I'm big on body language. You can tell if your trainer or your facilitator is enthusiastic about the subject that they are training by seeing them. I mean they can read from a manual, but you can tell whether this person is passionate about what they do when they're standing in front of a class.' (Participant 5, male; 31–40 years old)

Sub-theme 1.2: Customary

Participants' comfort with F2FT stemmed largely from its familiarity as their primary training method. Participants 5, 7

and 9 noted that this familiarity made them feel most at ease during F2FT sessions. This aligns with Akpoiroro and Adeleke (2022), who argue that trainees tend to perceive familiar training methods as more effective, as they facilitate better learning in known environments:

'I guess like 15 years ago when I started in this business, that's what I was exposed to you know, the face-to-face training. There was no other training that was ever virtual back then ... that's all I knew. I think being in a face-to-face environment, in the first few days, you don't have that confidence to speak up. But once you see your colleague putting their hand up and, you know, people getting to know each other, you kind of gain that confidence. I mean, I was always a very, very shy person. I'm still very, very shy. But I think that face-to-face interactions kind of aided in getting me out of my shell and meeting new people.' (Participant 5, male, 31–40 years old).

'It's better to sit in the classroom because you can engage better, you're comfortable to engage, you can ask questions face-to-face, you know who the person you are engaging with ... you feel more free.' (Participant 9, male, 41–50 years old)

Conversely, Participant 1 reported discomfort in F2FT because of a language barrier, although she adapted over time – a challenge that may affect others as well. Participant 10 also expressed a lack of confidence when required to present in front of others:

'The cons are I would say you always not maybe like comfortable like me that is an Afrikaans person that's supposed to be English but through that, you also learn to adapt.' (Participant 1, female, 21–30 years old)

'For me, I'm not confident speaking in front of people or a whole crowd, you understand. Like even my training I did with my higher certificate, I had to do a presentation, but if it was face-to-face, that means I would have had to do it in front of my big bosses live, you know, compared to being able to do it online. And that for me, worked out because I can't present face-to-face, I get nervous.' (Participant 10, male, 31–40 years old)

Sub-theme 1.3: Away-from-job training

Participants 3, 6 and 8 reported travelling away from home for F2FT sessions and staying in guest houses. They appreciated this opportunity, describing it as a chance to be 'spoiled' and to train 'away from distractions':

'I would say that's a great positive and also the nice food because you get booked out at a guest house (laughs).' (Participant 3, male, 31–40 years old)

'I think before COVID, I enjoyed training because it was either done at head office or those times it was at a bed and breakfast, so normally at the conference room or so ... I always enjoyed the venue or the location or where it was at or held at. We used to get spoiled a lot when it comes to the food and teatime etc.' (Participant 6, female, 31–40 years old)

'You are a few days in Cape Town, you are away from home and all the distractions, the kids, everything which is better.' (Participant 8, female, 31–40 years old)

While participants viewed accommodation during F2FT as a benefit, it was noted by Gayed et al. (2019) and Learnerships Jobs (2025) that it can be costly and logistically difficult,

especially for those from dispersed areas. Travel to the training venue was a challenge for Participant 10, and Participant 1 and Participant 6 cited traffic as an issue. Despite these drawbacks, most participants reported overall positive experiences.

Theme 2: Technology-based training experience

All participants confirmed that during the COVID-19 pandemic, their primary training mode shifted from face-to-face to virtual formats, mainly using Microsoft Teams and e-learning modules. The following sub-themes further explore their experiences with TBT.

Sub-theme 2.1: Flexible training environment

Many participants appreciated TBT's convenience and flexibility, particularly training from home at their own pace with access to recordings and e-learning materials. Representative participant responses include:

'The fact that you can do it whenever you want to do it. So, there isn't a time-based. You can learn whenever you want to learn. You can learn by listening to the recordings whenever you have time while still being able to do your job.' (Participant 2, female, 31–40 years old)

'I enjoyed the convenience and the fact that I didn't have to go anywhere. I could just wake up and click join.' (Participant 5, male, 31–40 years old)

Research by Boateng et al. (2021), Knowles et al. (2020) and Loeng (2020) supports TBT's convenience and flexibility, describing it as an accessible training technique that creates conducive, dynamic learning environments to enhance employee performance. Talati et al. (2018) highlight TBT's cost-effectiveness and scalability, reaching geographically dispersed audiences simultaneously. This is exemplified by Participant 3, who noted that accessing e-learning modules felt empowering:

'It was more empowering for me, I would say, because I could now do Udemy [learning platform] modules on my own, you know, assessments I feel would be interesting. So, it was more empowering yeah. I wouldn't think that any individual would think that it would be a negative because I mean it's something you're reading, you are gaining knowledge about and that just depends on you as the individual to use the platform that's available to you.' (Participant 3, Male, 31–40 years old)

Sub-theme 2.2: Connectivity challenges

With regards to connectivity challenges, several participants identified connectivity challenges as a primary TBT barrier, citing network issues and load-shedding. Participant 7 noted that connectivity problems made him feel he missed training content. This aligns with Hoq's (2020) assertion that efficient TBT requires strong internet connectivity and bandwidth. Participant responses illustrate these challenges:

'Definitely, the connectivity, because especially now with the load-shedding and so on, it's been difficult. Sometimes you miss the training that is online because of load-shedding or connectivity problems.' (Participant 10, male, 31–40 years old)

'So, you basically have two days within this connectivity issue time and whatever to try and focus. You don't know what could go wrong. Now we are experiencing load-shedding also, and

these tablets that we received, don't last the whole day.' (Participant 6, female, 31–40 years old)

Participant feedback confirms researchers' findings that connectivity issues remain a significant South African concern because of poor networks (Aruleba & Jere, 2022) and load-shedding (Moonasamy & Naidoo, 2022). While Adeleke (2020) identifies the Western Cape as having sufficient digital infrastructure, some participants still reported network challenges, demonstrating that connectivity concerns persist even in well-equipped regions.

Additionally, Munthali and Moyo (2024) emphasise that efficient technological devices are crucial for TBT effectiveness. This was exemplified by Participant 3, who attributed connectivity struggles to inadequate laptop equipment rather than network or load-shedding issues:

'I had a device from 2016, a laptop that was very outdated. I wouldn't have been able to have this MS Teams meeting with you, the RAM, the CPU, all of that was outdated ... For logging into MS Teams and for doing exams. I couldn't do it with my work device, I actually had to use my own personal laptop sometimes. I've logged it numerous times, IT has reports about it ... connectivity isn't even the issue ... You have to understand, the thing [*laptop*] is old ... From an IT perspective, you look at how the computer operates and from there you must know.' (Participant 3, male, 31–40 years old)

Sub-theme 2.3: Remote learning challenges

While TBT enables remote training completion at the trainees' own pace and location, it can disadvantage learners who struggle with concentration or feel isolated without human interaction and guidance. The majority of the participants indicated experiencing these challenges. Some feedback received:

'Doing the training on your own doesn't always help ... The challenge for me was to focus., you can't focus during virtual training. I didn't enjoy anything about it. It's challenging because now you are at home, your focus is nowhere, and you don't make notes ... See on MS Teams, they [*facilitator*] is talking, but you're in the background, you're maybe busy on your phone and you're not listening to them ... my brain doesn't work during virtual.' (Participant 8, female, 31–40 years old)

'When you're on your own, you can do what I do and just lay back, relax and not pay attention, not actually read through the content. For the assessment, I don't care how much I get, if I just pass, then that's fine.' (Participant 9, male, 41–50 years old)

Feedback from Participant 8 and Participant 9 regarding background distractions during training sessions supports Akpoiroro and Adeleke's (2022) emphasis that TBT flexibility requires trainee discipline.

Sub-theme 2.4: Adapting to technology/age

As participants were accustomed to F2FT before transitioning to TBT, they faced adaptation challenges, particularly those who were less technologically savvy. Majority of the participants stated that they initially found it challenging.

Participant 3 mentioned that he did not have a challenge; however, he indicated that he needed to help others adapt. The following are the responses:

'In the beginning, it was a bit difficult to adapt because I didn't know how to navigate it. They did give a platform where they showed you how to navigate MS Teams, but it was still nerve-racking. But in the end, it was very, how can I say, I'm comfortable now.' (Participant 2, female, 31–40 years old)

'I was not used to MS Teams. Even if I'm logged in, I don't know where to go or how to navigate the platform.' (Participant 11, female, 21–30 years old)

'All of them are not computer savvy. They don't have the background, you know, they started a bit late with computers and for them, it's not easy. You know, they struggle with these things and it's frustrating maybe for you to help these individuals, but you have to obviously understand that because who else is going to help this person.' (Participant 3, male, 31–40 years old)

Mohd Yusoff (2024) explains that TBT requires high levels of self-efficacy and technical skills from trainees. Those lacking technical competence may struggle to adapt to TBT methods.

Theme 3: Impact on employee performance

Part of this research examined F2FT and TBT's impact on employee performance. Training and development strengthen individuals' KSA to enhance job performance (Hermine & Yosepha, 2019; Kuruppu et al., 2021; Mehale et al., 2021). Participants described how training affected their performance and whether they maintained performance goals after transitioning to TBT. Several participants indicated that the COVID-19 pandemic, rather than the training method itself, directly impacted their performance, as evidenced in the following.

Sub-theme 3.1: The impact of coronavirus disease 2019

During COVID-19, many organisations implemented remote work policies for employee protection. Financial sales advisers faced particular challenges as their performance depends on meeting sales targets, yet pandemic restrictions prevented client visits. Post-pandemic, consumers continue experiencing financial hardship from job losses and salary cuts, supported by Andrade et al. (2022) who note the pandemic's disproportionate impact on lower-income families, ethnic minorities and vulnerable groups. In South Africa, this significantly affected low-income and disadvantaged communities in both urban and rural areas (Schotte & Zizzamia, 2023), ultimately reducing the market for financial sales advisers. Some of the participants responses were:

'It wasn't that easy to achieve my targets. People are still struggling to get their feet to be on par because of COVID.' (Participant 1, female, 21–30 years old)

'It was really challenging. I mean during COVID time, a lot of clients lost their jobs, etc. But I was still able to service the customers that I got.' (Participant 6, female, 31–40 years old)

'At first, when it comes to targets, we were not able to reach our targets during or after COVID. The first few months you know, it was a difficult time.' (Participant 11, female, 21–30 years old)

Sub-theme 3.2: Motivation to learn

Motivation significantly influences behavioural change following training interventions. Abudlhabib and Al-Dhaafri (2020) note that low learning motivation may prevent trainees from participating effectively and acquiring required KSA. When asked whether motivation was affected during the F2FT to TBT transition, most participants reported no significant impact. Representative responses include:

'I actually like learning and studying so for me, it was fine.'
(Participant 9, male, 41–50 years old)

'No never, I never felt like that. I don't know how other people feel, but for me, I adapt quickly so that wasn't an issue for me. Change is not an issue for me, so no, motivation and willingness were still the same.'
(Participant 10, male, 31–40 years old)

'Not me, no, it was the same. I was still willing to learn.'
(Participant 12, female, 31–40 years old)

This notion is supported by Rothwell (2020), who mentions that adults are motivated to learn for various reasons, such as meeting the performance expectations of the line manager.

Sub-theme 3.3: Behavioural shift post-training

For training to be considered successful, trainees must effectively transfer and apply acquired KSA to their jobs (Martins et al., 2019; Sheeba & Christopher, 2020). Participants identified which training method (F2FT or TBT) better enabled knowledge transfer, resulting in improved performance. They also explained how it helped them and whether line managers provided confirming feedback. Based on participant responses, F2FT emerged as the more effective method for knowledge transfer:

'You can take aspects from both, from the face-to-face and from the virtual, technology-based training. But I think I'm always going to sway towards the face-to-face because I mean, that's what I'm most comfortable with. I thrive on face-to-face interactions.'
(Participant 5, male, 31–40 years old)

'Via face-to-face, there were changes and I felt I was now able to perform my job better. Yeah, because like I said, the support was there, the stuff you learnt in the training is what you remember when you have to go and deal with clients.'
(Participant 8, female, 31–40 years old)

Participant 5 also explained that one can take aspects from F2FT and TBT, but he mentions he will always sway towards F2FT.

Participant 11 was the only participant to comment that TBT helped her more to transfer the acquired KSA back into the job. She explains that accessing the training material and recordings after the training played a significant role in assisting her to remember and practically apply what she learnt:

'As much as online seems to be difficult, it can also be nice in terms whereby you would like to go back to the sessions, you also want to go back to the recordings, you want to recap from those, rather than if it was face-to-face, you only have your notes, there's no recording that you can go back to. So, on that one, I'm going to go with online training, because with me, I have to grasp the information before I can practically apply it, so online allows

you to revisit that training. It's then easier than face-to-face where you only have your notes. The face-to-face conversation is not being recorded.'
(Participant 11, female, 21–30 years old)

Theme 4: Training preferences

To understand training preferences, participants described their learning styles, experiences with support during the F2FT to TBT transition and opinions on future training methods.

Sub-theme 4.1: Facilitator experience

Amponsah (2020) defines a learning style as an individuals' preferred method of collecting, processing and analysing information. Training and development professionals must therefore understand these different preferences to tailor instruction for adult learners' characteristics (Li & García, 2024). Based on the feedback, majority of the participants indicated that they prefer a facilitator during training. Some responses are:

'In this insurance industry, we need a facilitator. I would say I prefer a facilitator. I mean you can read through something now, but you might understand it a different way. So, I just like some clarity or just to double check am I understanding it correctly.'
(Participant 6, female, 31–40 years old)

'To be honest, I have never really done much training without a facilitator before, so I can't really say how it would be if there's no one facilitating. Because whether it was face-to-face or online, there was always a facilitator, I never had to go and do training all by myself. So, I won't know how that feels, so I'll have to go with facilitated.'
(Participant 12, female, 31–40 years old)

Furthermore, it was emphasised by Participant 6 that she needed clarity on some questions. This can be connected back to human interaction and guidance, where participants enjoyed immediate access to facilitators and colleagues for questions (Talati et al., 2018). Individuals preferring facilitated sessions may struggle with independent e-learning materials.

Sub-theme 4.2: The future of training

Participants were asked whether they believed that TBT could replace F2FT. According to Somfula and Zhanda (2023), training has evolved as technology has advanced over the years, making it necessary for organisations to train technologically to have a workforce updated with the technological era. This was supported by the majority of the participants. Some responses are:

'For me personally, yes. Although face-to-face is better [for me] to interact and ask questions whenever, online is better in the category [sales] that we work in because you can learn by listening to the recordings whenever you have time while still being able to do your job.'
(Participant 2, female, 31–40 years old)

'Yes, I positively and 100% feel like it could replace it. You can have more learners from different provinces attend one session. The business can look at saving money that way ... the whole world is transitioning. It's not just our company, you know, and that is the way forward for us. So yeah, thumbs up.'
(Participant 3, male, 31–40 years old)

'Yes, I think so. It's going to happen whether we like it or not. That is the future. This new technology and way of doing things, that is going to be what we need to adapt to.' (Participant 7, male, over 50 years old)

In contrast to this, at least two participants alleged that they do not believe that TBT can replace F2FT:

'Not at all ... like I said earlier, you need to have human interaction. You have to have a safe space where you know this is your working environment.' (Participant 1, female, 21–30 years old)

'No. Face-to-face is much better because you have the time, you have the calmness, you don't have to rush everything, you don't have to work AND learn, that's why that is a bonus for us.' (Participant 4, female, 31–40 years old)

Most participants believe TBT can replace F2FT, recognising that digital transformation makes TBT the likely future preference, despite some still favouring face-to-face methods. This shift is supported by rapid ICT development and increased internet access, which have made TBT more prominent (Ergüzen et al., 2021; Torraco, 2016). Digital learning offers advantages over traditional methods, driving corporate online learning growth (Žur & Friedl, 2021). Rising TBT demand stems from globalisation, the 4IR and COVID-19 (Mohamad et al., 2020; Samuels & Singh, 2025).

However, participants 9 and 5 both favoured a blended training approach. Participant 5 explained this is twofold: while TBT can substitute certain F2FT elements, it cannot entirely replace face-to-face methods, citing the organisation's current financial sales adviser training as an example:

'The question is twofold, yes and no because if technology-based training was a little bit more interactive, then it might be ... The new adviser training method here, as of recent is that they do two weeks in-person to meet a trainer and then two weeks virtual. If you are starting off training for the month in-person, then you've only got my attention for two weeks. I don't know how the others feel, but you only got my attention for two weeks. The other two weeks that is virtual, if I'm at home, I will be on my cell phone, play music in the background, be myself, get a cup of coffee whenever, I'll listen in the background but you're not my priority when it's virtual. And I've spoken to new advisers, they've told me that in those last two weeks of training, they are lost, they're not present, they are not grasping the information ... I just feel like especially new adviser training, I think maybe the current training method should start off two weeks virtual, and end off two weeks face-to-face, or otherwise do the entire training face-to-face. It will give those new advisers the confidence that they need when you end it off in face-to-face. You can cover the practical side, after providing the knowledge part of it virtually.' (Participant 5, male, 31–40 years old)

Alsalamah and Callinan (2021) support this, stating that diverse instructional methods create effective training design and successful transfer. Varied learning experiences maintain engagement, enable both theoretical and practical mastery, aid memory retention and benefit different learning styles.

Sub-theme 4.3: Preferred training method

When asked which training method better facilitated upskilling throughout their careers, all participants except Participant 11 identified F2FT as superior. They emphasised the importance of human interaction, peer learning opportunities and the comfort of familiar F2FT approaches. Some responses include:

'I would say through the face-to-face solely because I got to see other advisers from different areas and we got to share views and things you don't get, it's almost like different cultures being shared at that moment in time. And that is a wealth of knowledge ... Totally gives you an open-minded perspective on everything.' (Participant 3, male, 31–40 years old)

'I will say the face-to-face did upskill my knowledge better. The face-to-face also gives you more clarity that helps to improve yourself.' (Participant 4, female, 31–40 years old)

Maphosa and Maphosa (2023) note that F2FT remains widely used globally. They confirmed that, in 2015, over 70% of firms relied primarily on face-to-face delivery – only later starting to adopt blended or virtual formats. Participant feedback indicates that human interaction is crucial to the learning process.

Discussion

Each theme emerging from the research findings is connected to the study's research questions and has aided in answering these questions.

Perceived Effectiveness of Face-to-Face Training (F2FT) Face-to-face training was the dominant training method before the pandemic (ILO, 2021), with participants affirming its effectiveness because of familiarity, real-time interaction and immediate feedback (Akpoiroro & Adeleke, 2022). The ability to clarify content, read non-verbal cues and engage actively through facilitator enthusiasm enhances learning (Kim, 2022; Lewis, 2006; Rad et al., 2022). Our findings corroborate Rad et al.'s (2022) social presence theory, with participants specifically emphasising how physical co-presence and facilitator energy heightened their attention and emotional connection to content.

Off-site venues further supported focused learning by reducing distractions and fostering social and emotional engagement (Aboyasin & Sultan, 2017; Beinicke & Bipp, 2018). Challenges such as travel or language barriers were minimal and often mitigated through the interactive nature of F2FT (Bell et al., 2017). Interestingly, while Bell et al. (2017) identified travel and scheduling as significant F2FT barriers, our participants viewed these as minor inconveniences easily outweighed by the interactive benefits – suggesting that in contexts with adequate infrastructure, these disadvantages may be overstated. Overall, F2FT is widely viewed as an effective training method that improves employee performance (Unicon, 2024). Overall, F2FT is widely viewed as an effective training method that improves employee performance (Unicon, 2024).

Perceived effectiveness of technology-based training compared to face-to-face training

Technology-based training's growth accelerated during the COVID-19 pandemic, enabling continuity via synchronous virtual sessions and asynchronous e-learning (Kalio, 2019; Mohamad et al., 2020). Participants valued TBT's flexibility and ability to learn at their own pace, including revisiting recorded content – advantages over traditional note-taking in F2FT (Hoq, 2020; Žur & Friedl, 2021). These findings directly support Žur and Friedl's (2021) argument that TBT's asynchronous capabilities enable self-directed knowledge consolidation and accommodate diverse learning speeds. However, effectiveness depended heavily on trainees' self-discipline and conducive learning environments (Akpoiroro & Adeleke, 2022). Distractions at home and technological challenges, especially among older or less tech-savvy employees, limited engagement and motivation (Alshawabkeh, 2020; Fayole & Ajayi, 2021). Our findings extend Fayole and Ajayi's (2021) observations on digital literacy gaps, revealing that generational differences in technology comfort represent a more substantial barrier in the South African context than previously acknowledged, particularly affecting knowledge retention and application. Infrastructure issues like poor connectivity further hampered learning. This infrastructural constraint is underexplored in Western-centric TBT literature but proved critical in our emerging market context, where load-shedding and unreliable internet directly impeded learning continuity. While literature praises TBT's accessibility (Hoq, 2020), participants perceived it as less effective than F2FT because of reduced human interaction and technical barriers (Areiqat & Al-Doori, 2018; Kim, 2022). This reveals a critical tension between TBT's theoretical accessibility advantages and employees' actual perceived effectiveness in real-world implementation – suggesting that technological potential does not automatically translate to learning outcomes. Thus, despite flexibility benefits, TBT's impact on performance improvement remains constrained by these challenges.

Potential of TBT Replacing F2FT Workplace demands for continuous upskilling surpass traditional methods' capacity (Li, 2022). The pandemic hastened digital adoption, with organisations increasingly integrating TBT for cost-effective, wide-reaching training (Žur & Friedl, 2021). Participants recognised this trend but raised concerns about TBT's limitations – lack of interaction, immediate support, attention challenges and digital skills gaps – especially among older employees. Critically, our data challenge the either-or replacement framing prevalent in much of the literature (e.g. Clapper & Greyling, 2022), with participants rejecting binary thinking in favour of integration. Many advocated for blended learning, combining TBT's flexibility with F2FT's practical and social strengths (Alsalamah & Callinan, 2021; Kim, 2022). This employee-driven preference for hybrid approaches validates Alsalamah and Callinan's (2021) and Kim's (2022) theoretical propositions about blended learning's superiority, but grounds these claims in actual user perspectives rather than institutional assumptions. Suggested approaches include phased training,

starting with virtual modules followed by in-person sessions, optimising engagement and learning transfer (Maxwell, 2018). Given infrastructure issues in South Africa, such as unreliable internet and load-shedding, TBT cannot fully replace F2FT. This contextual reality challenges the universal applicability of TBT adoption frameworks developed in stable-infrastructure contexts, suggesting that the replacement debate must account for regional technological readiness – a dimension largely absent from existing literature. Instead, a blended model is recommended to enhance accessibility and performance while mitigating each method's limitations (Hewett et al., 2019; Martins et al., 2019). Our findings thus extend Martins et al.'s (2019) blended learning framework by demonstrating how contextual constraints – not just pedagogical preferences – necessitate hybrid approaches in emerging markets.

Practical implications

Incorporating both F2FT and TBT poses challenges for T&D professionals, who must be skilled in designing and delivering training through both methods (Abudlhabib & Al-Dhaafri, 2020). This dual competency requires additional time and effort to prepare well-organised, engaging content, which often leads trainees to perceive blended training as demanding (Alvarez, 2020). To maximise effectiveness, organisations should ensure T&D professionals are proficient in both methods. A practical approach is to deliver theoretical content via self-paced e-learning (TBT) followed by practical sessions in-person (F2FT). Additionally, executives and managers play a crucial role in fostering a learning culture by encouraging employees to engage with training and highlighting its benefits. Managerial support helps motivate employees to enrol in and complete e-learning courses with discipline.

Limitations and suggestions for future research

Several limitations should be acknowledged in this study. The present study employed a qualitative research method. While appropriate for exploring participants' lived experiences and perceptions, this limits the generalisability of the findings because of its subjective nature and small sample size. Secondly, participants were drawn exclusively from one organisation within the financial services sector, restricting the applicability of findings to this specific context. Thirdly, the potential for researcher bias exists, as is inherent in qualitative research where the researcher serves as the primary instrument of data collection and analysis. Despite assurances of confidentiality and participants' confirmation that they provided honest responses, the potential for social desirability bias remained, as participants may have felt compelled to provide responses they perceived as favourable rather than expressing genuine experiences and opinions. It is recommended that future research should consider the use of other research methods (quantitative or mixed methods). Furthermore, future research should expand sampling beyond a single organisation and industry to include participants from diverse organisations, industries

and provinces across South Africa, thereby enhancing the generalisability of findings. A larger sample size exceeding 12 participants would provide broader perspectives and richer insights. Additionally, incorporating various job roles rather than focusing exclusively on financial sales advisers would strengthen the comprehensiveness of findings. To minimise potential bias, researchers should avoid sampling from their own organisations, as external researchers may elicit more candid and honest responses from participants who feel less constrained by organisational relationships.

Conclusion

Training methods significantly influence the effectiveness of training interventions, and F2FT versus TBT has been extensively debated within the T&D domain for several years (Akpoiroro & Adeleke, 2022; Beinicke & Bipp, 2018; Gayed et al., 2019; Jevana, 2017; Okana et al., 2018). While researchers have presented various arguments regarding whether TBT can effectively replace F2FT within organisations, this study aimed to explore employees' perceived effectiveness of TBT compared to traditional F2FT to identify the most preferred training method. The research objective was achieved through an examination of findings derived from the research questions. However, within the South African context, inadequate technical infrastructure and load-shedding challenges may prevent TBT from achieving the same success experienced in countries without these constraints. The research findings indicated that F2FT emerged as the preferred training method, with participants finding it more effective and enjoyable than TBT. Nevertheless, participants acknowledged that despite TBT's challenges, it demonstrated potential for effectiveness under improved conditions. Based on the findings, participants established benefits in both training methods and believe it can work concurrently to achieve an effective training experience. It can be concluded that although the literature motivates that TBT is the future and more effective training method, the research findings suggest that F2FT remains the preferred training method and should not be replaced. It was established that a blended training approach would be the most effective solution to future training interventions, as trainees will be exposed to the benefits of F2FT and TBT.

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Competing interests

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CRedit authorship contribution

Mineshree Naidoo-Chetty: Conceptualisation, Project administration, Supervision, Writing – review & editing. Shandre K. Meyer: Conceptualisation, Formal analysis, Investigation, Methodology, Writing – original draft. All authors reviewed the article, contributed to the discussion of results, approved the final version for submission and publication and take responsibility for the integrity of its findings.

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Data availability

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Disclaimer

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