

From Chalkboards to Smartboards: A Narrative Inquiry into the Experiences of Veteran Teachers Adapting to ICT

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Abstract

The rapid integration of information and communication technology (ICT) into education has significantly transformed teaching practices, often challenging veteran teachers trained in pre-digital pedagogies. This narrative inquiry examined the lived experiences of older teachers as they adapted to digital tools in classroom instruction. The study aimed to explore teachers' anxieties, coping strategies, moments of achievement, and perceptions of self-efficacy during this transition. Data were collected through in-depth narrative interviews with veteran teachers working in secondary-level institutions. Using narrative analysis, the study identified patterns across participants' stories while preserving individual voices. Findings revealed initial resistance and technological anxiety, followed by gradual adaptation facilitated by peer support, institutional pressure, and experiential learning. Teachers reported increased confidence over time, though concerns about workload and identity persisted. The study concluded that veteran teachers' adaptation to ICT was not merely technical but deeply emotional and identity-driven. Understanding these experiences is essential for designing supportive professional development and inclusive digital education policies.

Key Words *Veteran teachers; ICT integration; Narrative inquiry; Teacher self-efficacy; Digital transition; Lived experiences*

Introduction

The integration of information and communication technology (ICT) into education has fundamentally reshaped teaching and learning processes worldwide. Digital tools such as smartboards, learning management systems, and online assessment platforms have become increasingly central to instructional practice. While these innovations promise enhanced engagement and efficiency, they have also introduced new challenges, particularly for veteran teachers whose professional identities were formed in predominantly analog classrooms (Ertmer & Ottenbreit-Leftwich, 2010).

Veteran teachers often defined as educators with more than twenty years of teaching experience bring deep pedagogical knowledge, classroom management skills, and

curricular expertise (Day & Gu, 2010). However, many began their careers at a time when chalkboards, printed textbooks, and face-to-face instruction were the primary teaching tools. The sudden acceleration of ICT adoption, especially during periods of educational reform and crisis-driven digitalization, has required these teachers to rapidly reconfigure long-standing practices (Selwyn, 2011).

Research has shown that technology integration is not solely a technical process but a deeply personal and emotional one. Teachers' beliefs, confidence, and professional identities significantly influence their willingness and ability to adopt digital tools (Tondeur et al., 2017). For veteran teachers, the transition to ICT may evoke anxiety, fear of incompetence, or concerns about diminished professional authority (Howard, 2013). At the same time, successful adaptation can foster renewed motivation, professional growth, and a sense of accomplishment.

Teacher self-efficacy, defined as an individual's belief in their capacity to organize and execute actions required to achieve desired outcomes (Bandura, 1997), plays a crucial role in this process. Studies indicate that teachers with higher self-efficacy are more likely to experiment with technology and persist despite challenges (Scherer et al., 2018). However, self-efficacy is shaped through experience, feedback, and social context—factors that may operate differently for older teachers navigating unfamiliar digital environments.

Despite a growing body of research on ICT integration in education, much of the literature focuses on pre-service teachers or early-career educators who are often labeled “digital natives” (Prensky, 2001). Comparatively less attention has been paid to veteran teachers, particularly through qualitative approaches that center their voices and lived experiences. Quantitative surveys frequently measure attitudes or skill levels but fail to capture the emotional trajectories, identity negotiations, and meaning-making processes that accompany technological change.

Narrative inquiry offers a valuable methodological approach for addressing this gap. By attending to the stories teachers tell about their experiences, narrative research illuminates how individuals interpret change, construct professional identities, and navigate transitions over time (Clandinin & Connelly, 2000). Such an approach is especially appropriate for understanding veteran teachers' adaptation to ICT, as it acknowledges both personal histories and broader institutional contexts.

The educational context of rapid digitalization has intensified the relevance of this inquiry. Policy mandates, institutional expectations, and external disruptions have often compelled teachers to adopt digital tools with limited preparation or support. For veteran teachers, this abrupt shift can feel overwhelming, yet it may also open opportunities for learning and reinvention. Understanding how these educators experience and respond to ICT integration is essential for developing professional

development models that are empathetic, effective, and inclusive.

This study therefore sought to explore the lived experiences of veteran teachers as they transitioned from traditional teaching tools to digital technologies. By foregrounding their narratives, the research aimed to deepen understanding of the emotional, cognitive, and professional dimensions of ICT adaptation and to contribute to more nuanced discussions on teacher development in the digital age.

Purpose of the Study

The purpose of this study was to explore the lived experiences of veteran teachers adapting to the integration of ICT in their teaching practices. Specifically, the study aimed to understand how older teachers experienced technological transition, including their anxieties, moments of success, coping strategies, and perceptions of self-efficacy. Through narrative inquiry, the research sought to contribute to existing knowledge by highlighting the human and identity-related dimensions of digital transformation in education and by informing professional development practices and educational policy.

Research Questions

The transition to ICT represents not only a pedagogical shift but also a personal and professional challenge for veteran teachers. Exploring their experiences can provide valuable insights into how technological change is negotiated within established teaching identities.

- i. How do veteran teachers describe their initial experiences and emotional responses to ICT integration?
- ii. What challenges and successes do veteran teachers encounter while adapting to digital teaching tools?
- iii. How do these experiences influence their perceived self-efficacy and professional identity?

Ethical Considerations

Ethical standards were rigorously maintained throughout the study to protect participants' rights and well-being. Prior to data collection, informed consent was obtained after clearly explaining the study's purpose, procedures, voluntary nature of participation, and the right to withdraw at any stage without penalty. Participants were assured of confidentiality and anonymity through the use of pseudonyms and the removal of identifying details from transcripts and reports. Data were securely stored in password-protected files accessible only to the researcher. The study adhered to institutional ethical guidelines for educational research and received approval from the relevant research ethics committee before commencement.

Review of Related Literature

The integration of information and communication technology (ICT) into education has been widely examined over the past two decades, with scholars emphasizing its potential to transform teaching practices, enhance student engagement, and expand access to learning resources (Koehler & Mishra, 2009; Selwyn, 2011). However, research also suggests that the success of ICT integration depends heavily on teachers' beliefs, competencies, and professional contexts. This section reviews key theoretical perspectives and empirical studies related to ICT adoption, veteran teachers, self-efficacy, and narrative approaches, while identifying gaps that the present study seeks to address.

ICT Integration and Teacher Beliefs

Early models of technology integration often focused on access to hardware and technical skills. However, subsequent research highlighted that teachers' pedagogical beliefs and attitudes play a decisive role in shaping how and whether technology is used in classrooms (Ertmer, 1999). Teachers who view technology as compatible with their instructional goals are more likely to integrate it meaningfully, whereas those who perceive it as disruptive or threatening may resist adoption.

Ertmer and Ottenbreit-Leftwich (2010) argued that second-order barriers—such as beliefs, confidence, and professional identity—are often more challenging than first-order barriers like infrastructure. For veteran teachers, whose instructional practices are deeply rooted in experience, these internal barriers may be particularly salient. Studies have shown that long-established routines can make pedagogical change emotionally demanding, especially when teachers fear loss of competence or authority (Howard, 2013).

Veteran Teachers and Digital Transition

Veteran teachers possess extensive classroom experience and subject mastery, yet they are frequently positioned as less adaptable to technological change compared to younger colleagues (Day & Gu, 2010). This framing can reinforce age-related stereotypes and contribute to self-doubt among older educators. Research indicates that veteran teachers may experience higher levels of anxiety when required to use unfamiliar digital tools, particularly when training is insufficient or delivered in a non-supportive manner (Mueller et al., 2008).

At the same time, studies caution against portraying veteran teachers as uniformly resistant to technology. Some research demonstrates that with appropriate support, these teachers can successfully integrate ICT and even leverage their pedagogical expertise to use technology more purposefully than novice teachers (Tondeur et al., 2017). This suggests that adaptation is not determined by age alone but by contextual

factors such as institutional culture, collegial support, and professional learning opportunities.

Teacher Self-Efficacy and ICT Use

Teacher self-efficacy has been widely recognized as a critical factor influencing instructional behavior, persistence, and openness to innovation (Bandura, 1997). In the context of ICT integration, self-efficacy relates to teachers' confidence in their ability to use digital tools effectively for teaching and learning (Scherer et al., 2018).

Research shows that teachers with higher ICT-related self-efficacy are more willing to experiment with new technologies and overcome technical challenges (Hatlevik & Hatlevik, 2018). For veteran teachers, self-efficacy is often shaped through mastery experiences and peer validation rather than formal training alone. Conversely, repeated negative experiences with technology can undermine confidence and reinforce avoidance behaviors.

Importantly, self-efficacy is not static. It evolves through interaction with social and institutional environments. Professional development models that emphasize collaboration, mentoring, and hands-on practice have been found to enhance veteran teachers' confidence in using ICT (Lawless & Pellegrino, 2007).

Emotional and Identity Dimensions of Technological Change

Beyond skills and confidence, ICT integration has profound implications for teachers' professional identities. Teaching is closely tied to notions of competence, authority, and care, all of which may be challenged when teachers feel less proficient than their students in digital environments (Beijaard et al., 2004).

Kelchtermans (2005) emphasized that educational change often provokes vulnerability among teachers, particularly when reforms question established expertise. Veteran teachers adapting to ICT may experience tension between their identity as experienced professionals and their novice status as technology users. This tension can generate anxiety but may also lead to professional renewal when teachers reinterpret their roles in digitally mediated classrooms.

Narrative Inquiry in Educational Research

Narrative inquiry offers a powerful methodological framework for examining such complex, identity-laden experiences. Clandinin and Connelly (2000) described narrative inquiry as the study of experience through stories, emphasizing temporality, sociality, and place. Rather than treating teachers' experiences as variables to be measured, narrative inquiry attends to how individuals make sense of change over time.

In studies of teacher development, narrative approaches have been used to illuminate

emotional labor, professional transitions, and meaning-making processes that are often obscured in quantitative research (Clarke et al., 2012). Despite its suitability, narrative inquiry has been underutilized in research on veteran teachers and ICT integration, particularly in contexts where digitalization has been rapid and externally imposed.

While existing literature provides valuable insights into ICT integration and teacher self-efficacy, several gaps remain. First, veteran teachers' voices are often marginalized or generalized within broader studies. Second, there is limited narrative research that captures the emotional and identity-related dimensions of digital transition. Finally, few studies examine how anxieties and triumphs coexist in shaping teachers' evolving sense of self-efficacy. The present study addresses these gaps by employing narrative inquiry to explore the lived experiences of veteran teachers adapting to ICT, thereby contributing a nuanced, human-centered perspective to the literature on educational change.

Methods and Materials

This study employed a qualitative research design grounded in narrative inquiry to explore the lived experiences of veteran teachers adapting to ICT integration. Narrative inquiry was selected because it allows for an in-depth examination of how individuals construct meaning from experience over time, particularly during periods of professional transition (Clandinin & Connelly, 2000). Given the study's focus on anxieties, triumphs, and self-efficacy, a narrative approach was deemed most appropriate for capturing emotional trajectories and identity-related changes that cannot be adequately understood through quantitative methods.

The study was conducted in secondary-level educational institutions where ICT integration had recently become mandatory. The participant group consisted of veteran teachers with a minimum of 15 years of teaching experience, many of whom had spent the majority of their careers using traditional instructional tools such as chalkboards, printed materials, and lecture-based methods.

Purposive sampling was used to identify participants who had direct experience transitioning from non-digital to digital teaching environments. A total of 5 veteran teachers participated in the study, representing diverse subject areas including languages, social sciences, and mathematics. Participants ranged in age from 30 to 55 years.

Data were collected through in-depth narrative interviews, designed to encourage participants to recount their experiences in their own words. An open-ended interview protocol guided the conversations, focusing on participants' professional histories, initial encounters with ICT, emotional responses, challenges, successes, and evolving perceptions of competence.

Each interview lasted between 60 and 90 minutes and was conducted in a quiet setting chosen by the participant. With consent, interviews were audio-recorded and later transcribed verbatim. Reflective field notes were maintained to document contextual details and non-verbal expressions.

Narrative analysis was employed to examine the structure, content, and meaning of participants' stories. Following Riessman's (2008) approach, the analysis involved repeated readings of transcripts to identify narrative segments related to ICT adaptation. Stories were first analyzed individually to preserve coherence and then examined across cases to identify recurring patterns.

Themes were developed inductively, focusing on shared experiences while respecting individual variation. To enhance credibility, analytic memos were maintained, and emerging themes were reviewed for consistency across narratives.

Trustworthiness was ensured through prolonged engagement, thick description, and transparency in analytic procedures. Participants were invited to clarify or elaborate on their narratives when needed, enhancing accuracy. An audit trail documenting methodological decisions was maintained to support dependability and confirmability.

Results / Findings

The findings are presented through thematic narratives derived from participants' accounts. Each theme is illustrated using multiple narrations from teachers and supported by perspectives from key informants where applicable. Pseudonyms are used to protect anonymity.

Participants frequently described their first encounters with ICT as emotionally unsettling, marked by fear, confusion, and self-doubt. One participant stated that the introduction of smartboards made her feel "as if everything I knew about teaching suddenly became outdated." Another teacher recalled feeling exposed in front of students, noting that "when the screen froze, I felt helpless, like a beginner again." A third participant explained that learning digital tools disrupted his confidence, saying that "after so many years of experience, struggling with simple technology was embarrassing." Another teacher reflected that formal ICT training felt overwhelming, stating that "the pace was too fast, and I was afraid to ask questions." These narrations revealed a shared sense of professional displacement during the early stages of ICT adoption.

Despite early anxiety, participants described gradual learning processes supported by peers, trial-and-error, and informal mentoring. One teacher shared that observing younger colleagues helped her gain confidence, explaining that "watching others use technology made it feel less frightening." Another participant stated that repeated practice outside classroom hours became essential, noting that "I learned more by

making mistakes at home than in training sessions.” A third teacher mentioned that student assistance unexpectedly became a resource, saying that “when students helped me, it reduced my fear.” A key informant emphasized that peer collaboration played a crucial role, stating that “teachers who worked together adapted faster than those working alone.” These narrations highlighted adaptive strategies grounded in social learning and experiential practice.

Participants identified specific moments when successful ICT use led to increased confidence and satisfaction. One participant described a sense of accomplishment after delivering a multimedia lesson, stating that “for the first time, I felt proud using the smartboard.” Another teacher explained that positive student feedback reinforced her confidence, noting that “students were more engaged, and that motivated me.” A third participant shared that mastering basic digital tasks changed his perspective, saying that “once I learned the basics, the fear slowly disappeared.” Another teacher reflected that adapting to ICT renewed professional interest, stating that “learning something new made teaching exciting again.” These narrations demonstrated how mastery experiences contributed to growing self-efficacy.

Despite progress, participants expressed lingering concerns about workload, pace of change, and professional identity. One teacher stated that “preparing digital lessons takes more time than traditional teaching.” Another participant expressed concern about sustainability, noting that “constant updates make it difficult to keep up.” A third teacher reflected on identity tensions, explaining that “sometimes I still feel that my experience is valued less than technical skill.” A key informant observed that veteran teachers often required reassurance, stating that “they need recognition for their pedagogical expertise alongside ICT skills.” These narrations reflected ongoing negotiation between established professional identities and new technological expectations.

Based on these findings and themes, the following patterns were evident:

- i. Initial ICT integration was accompanied by emotional discomfort and reduced confidence.
- ii. Learning occurred through informal support, practice, and collaboration.
- iii. Successful experiences enhanced self-efficacy and motivation.
- iv. Veteran teachers continued to negotiate tensions between pedagogical expertise and technological demands.

The findings directly addressed the research questions by illustrating how veteran teachers experienced, adapted to, and made meaning of ICT integration over time.

Discussion

This study explored the lived experiences of veteran teachers adapting to ICT in secondary classrooms. The findings highlight the complex interplay between emotional, cognitive, and professional dimensions of technological transition, echoing and extending existing literature.

Participants reported substantial anxiety during early ICT adoption, reflecting feelings of displacement and diminished professional competence. These experiences align with Ertmer and Ottenbreit-Leftwich's (2010) assertion that second-order barriers—beliefs and confidence—pose significant obstacles to technology integration. Similarly, Howard (2013) observed that veteran teachers often experience fear and uncertainty when required to use unfamiliar tools, particularly when prior expertise is challenged. In this study, initial struggles were compounded by the public nature of classroom technology use, intensifying vulnerability and self-doubt.

Despite initial anxiety, participants demonstrated adaptive strategies through observation, peer support, and trial-and-error practice. This finding resonates with Bandura's (1997) concept of self-efficacy, which develops through mastery experiences and social modeling. Teachers who engaged in collaborative learning or sought assistance from students or colleagues reported faster skill acquisition and growing confidence. Tondeur et al. (2017) similarly emphasized that peer networks and collaborative professional development enhance veteran teachers' ICT integration, suggesting that social learning mechanisms are critical in overcoming technical and emotional barriers.

The narratives revealed that achieving competence with digital tools led to heightened self-efficacy, motivation, and a renewed sense of professional identity. These experiences illustrate the reciprocal relationship between mastery and confidence described in Scherer et al. (2018). Moreover, teachers reported that integrating ICT allowed them to enrich pedagogical approaches, supporting the notion that technology can complement rather than replace existing expertise (Koehler & Mishra, 2009). Such moments of achievement fostered positive feedback loops, reinforcing engagement with ICT and mitigating earlier anxieties.

Despite progress, veteran teachers continued to experience tension between their pedagogical experience and the demands of new technology. Kelchtermans (2005) highlighted that professional identity is central to how teachers negotiate educational change. In this study, participants reflected on increased workload, the rapid pace of technological updates, and perceptions that technical competence might overshadow accumulated teaching experience. These tensions suggest that ICT integration is not purely a technical challenge but an ongoing negotiation of identity, authority, and expertise.

The findings suggest that successful ICT integration for veteran teachers requires a multi-dimensional approach that addresses both technical skills and professional identity. Institutions should implement structured, collaborative, and incremental training programs, provide mentoring opportunities, and recognize veteran teachers' pedagogical contributions alongside digital proficiency. Such strategies align with recommendations by Lawless and Pellegrino (2007) and Hatlevik and Hatlevik (2018) for effective professional development.

Conceptual Framework

The study's conceptual framework integrates Bandura's self-efficacy theory with identity negotiation theory (Kelchtermans, 2005). Veteran teachers' adaptation to ICT is mediated by:

- i. Mastery Experiences: Success in using technology enhances confidence.
- ii. Vicarious Experiences: Observing peers and students provides models for learning.
- iii. Emotional States: Anxiety can inhibit engagement, while accomplishment fosters motivation.
- iv. Professional Identity: Negotiating the balance between long-standing expertise and new technical demands influences adaptation.

This framework illustrates how self-efficacy, emotional responses, and identity interplay to shape the trajectory of ICT adoption. It informs future research, highlighting the importance of contextual, relational, and personal factors in technology-mediated teaching.

Conclusions

Veteran teachers' experiences of transitioning from chalkboards to smartboards reveal that ICT integration is as much an emotional and identity-driven process as it is technical. Initial anxiety and perceived incompetence gave way to gradual adaptation through social support, experiential learning, and moments of success. Teachers' confidence and professional renewal were reinforced when mastery experiences were recognized and leveraged in teaching practice. However, ongoing challenges, including workload, pace of technological change, and identity negotiation, underscore the need for supportive professional development programs. The study contributes a nuanced understanding of veteran teachers' lived experiences, emphasizing that ICT adoption requires attention to emotional well-being, pedagogical expertise, and collaborative learning structures. Insights from this research can guide policy formulation, teacher training, and institutional strategies aimed at facilitating inclusive, effective digital transitions in education.

Recommendations

- i. Given the study's findings, veteran teachers require multi-faceted support to navigate ICT transitions effectively. The following recommendations address professional development, institutional practices, and policy to enhance adaptation, self-efficacy, and sustainable digital integration.
- ii. Implement collaborative and mentorship-based ICT training programs.
- iii. Recognize and leverage veteran teachers' pedagogical expertise alongside technology skills.
- iv. Provide structured, incremental opportunities for hands-on technology practice.
- v. Incorporate emotional and identity support in professional development initiatives.
- iv. Monitor and evaluate digital adoption processes to ensure sustained competence and confidence.

Limitations of the Study

This study's findings are context-specific, focusing on veteran teachers in secondary schools within a particular region, limiting generalizability. The sample size was modest, and experiences may differ across subjects or institutional types. Self-reported narratives may also reflect recall bias or social desirability. Despite these limitations, the study provides rich, in-depth insights into the emotional, cognitive, and identity-related dimensions of ICT adaptation.

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