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Lived Experiences of Elementary Public School Teachers with Apple Teacher Certification in the Division of Bataan: A Multi-cohort Reflexive Thematic Analysis

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Abstract — This study explores the lived experiences of public elementary school teachers in the Division of Bataan who obtained Apple Teacher Certification and how they make sense of technology integration in an increasingly digital educational environment. Using qualitative, reflexive thematic analysis, the study examined narratives from four teacher cohorts, categorized by teaching experience and levels of technology integration. Apple Teacher Certification emerged as a catalyst for professional growth rather than a standalone credential. The findings highlighted the importance of contextualized training, supported classroom enactment, reflective and adaptive practice, collaborative professional culture, and sustained institutional Support in shaping meaningful technology use. These insights informed the development of the Framework of Reflexive, Pedagogical, & Systemic Integration (RPSI), which presents technology integration as a cyclical and developmental process shaped by professional learning, classroom enactment, peer collaboration, and policy Support. Teachers with sustained development and strong institutional backing demonstrated greater instructional confidence and innovation, whereas those with limited Support struggled to maintain technology-enhanced practices. The study concludes that meaningful and sustainable technology integration in public schools cannot be achieved through certification or isolated training alone but requires an aligned system of professional learning, reflective practice, collaboration, and institutional Support. The proposed framework offers practical insights for policymakers, school leaders, and professional development planners in the Division of Bataan.

Keywords: reflexive thematic analysis; teacher professional development; technology integration; TPACK; diffusion of innovation.

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I. INTRODUCTION

The 21st century has transformed education into a digitally-driven landscape that demands technological proficiency, adaptability, and innovation from teachers. Across the globe, technology integration has reshaped pedagogical frameworks, requiring teachers to blend traditional methods with digital resources that promote critical thinking, collaboration, and creativity.

According to a 2023 survey conducted by ZipDo, eighty-nine percent (89%) of K–12 instructors now incorporate educational technology into their classrooms (Essential Technology in Education Statistics, 2023). This widespread adoption reflects a broader shift toward integrating digital tools to enhance student engagement, streamline assessment, and foster individualized learning experiences. The transformation brought about by technology extends beyond convenience, and it fundamentally reshapes how students learn and how teachers teach. Recent surveys reveal that 76% of students believe technology makes learning more engaging (EdWeek, Technology in Schools: A Teacher Survey, 2023). Digital tools, such as interactive platforms, multimedia resources, and collaborative applications, allow learners to participate more actively in the educational process.

Similarly, ninety percent (90%) of educators say that technology helps them evaluate students' learning more successfully (2023 State of Technology in Education Report, 2023). Teachers can more effectively track students' progress and adapt their lessons to meet their varied needs by using data-driven insights and realtime feedback. Future teachers must be ready to incorporate educational technology into their lesson plans as it develops. Adopting new tools is only one aspect of effective technology use; another is knowing how to use them to promote and improve learning outcomes.

Teachers may create more dynamic, relevant, and inclusive learning environments by carefully incorporating digital resources into their lesson plans. Additionally, technology enables students with varying learning styles, aptitudes, and interests to receive individualized training that best supports their achievement.

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In the Philippine context, the Department of Education (DepEd) has committed to enhancing teachers' digital literacy and integrating information and communications technology (ICT) into classroom practice. The DepEd ICT Transformation Program and the Digital Rise Plan 2022–2028 emphasize the development of 21st-century skills, equitable access to learning technologies, and educators' professional growth through sustained digital training (Department of Education, 2022).

Teachers' Acceptance and Application of Educational Technology in Teaching the 21st Century Learners, a study carried out in Cebu by Aldave and Obiso (2025), examined how teachers view and use technology in the classroom. The study found that teachers generally accept educational technology. This indicates that the majority of educators have a favorable opinion of using digital resources in their lessons. Teachers' perspectives were further examined through the lens of the Unified Theory of Acceptance and Use of Technology (UTAUT). The findings demonstrated that although educators are willing to use technology, practical obstacles prevent its effective use. The two biggest challenges were unequal student access to devices at home and limited or unstable internet connectivity at school. These results demonstrate how equitable technology integration in education is still hampered by the digital divide.

The study also examined the relationships among technological proficiency, acceptance, and teaching experience. The findings show a weak but positive connection, suggesting that teachers' acceptability or competence with technology is not significantly impacted by years of teaching experience. This suggests that both novice and veteran teachers share similar attitudes toward educational technology and face comparable challenges in its implementation.

In this regard, the Province of Bataan has emerged as one of the pioneering local government units (LGUs) in implementing technology-based innovations in education. Through the leadership of the Provincial Government and in partnership with DepEd Bataan, Apple Philippines, and Basecamp, teachers were equipped with Apple MacBook Air devices and enrolled in Apple Teacher Certification programs. This initiative symbolizes a shift toward a more technology-empowered teaching culture, aligning with global standards of digital education. The Apple Teacher program, an international professional learning platform, trains educators to use

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Apple devices and applications effectively in teaching and assessment, promoting creative lesson design and digital fluency (Power Mac Center, 2025).

However, technological transformation is not only about acquiring devices or enhancing skills. It also involves cognitive, pedagogical, and emotional adaptation. Teachers transitioning to the Apple ecosystem experience shifts in mindset, teaching style, and professional identity. These experiences represent a form of professional transformation that is deeply personal, contextual, and often underexplored in the Philippine public school setting. Understanding these lived experiences contributes to a more holistic picture of educational reform through technology.

Given the transformative nature of technology integration, a phenomenological approach provides a means to explore how teachers construct meaning from their adaptation to Apple-based teaching environments. This study aims to capture how teachers interpret, internalize, and translate the Apple Teacher experience into pedagogical practice, revealing insights into digital learning culture and identity formation within the public school system.

Despite the promise of such initiatives, a critical gap remains in understanding what happens after certification. While Apple Teacher Certification equips educators with technical knowledge and instructional strategies, certification alone does not guarantee sustained, meaningful classroom enactment. The transition from completing certification requirements to consistently integrating Apple-based tools into daily teaching practice involves complex cognitive, pedagogical, and emotional processes. Teachers must adapt their instructional beliefs, classroom routines, assessment practices, and professional identities as they navigate the realities of public school contexts. These transitions are highly personal, context-dependent, and shaped by institutional Support, classroom conditions, and teachers' prior experiences.

Notably, existing research has largely overlooked this transition phase. There is limited empirical evidence that explores how public elementary teachers experience the shift from Apple Teacher Certification to long-term classroom implementation, particularly within the Philippine public school system. Most studies emphasize training outcomes, technology acceptance, or access, leaving the lived experiences of teachers during sustained enactment less examined. This gap is especially significant given that professional development initiatives are often evaluated

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based on participation or certification rates rather than on how teachers internalize, adapt, and maintain new practices over time.

In response to this gap, the present study adopts a phenomenological approach to examine the lived experiences of public elementary school teachers in Bataan who have achieved Apple Teacher Certification. By focusing on teachers' narratives, this study seeks to understand how educators make sense of their transition from certification to classroom enactment, how they integrate Apple-based tools into their pedagogy, and how this process shapes their professional identity and instructional practice. Through this lens, the study aims to contribute deeper insights into technology-enabled professional transformation and to inform more responsive, sustainable models of teacher professional development in public education.

Literature Review

Apple Technology in Education

The reviewed literature and studies collectively underscore that technology integration in education is both necessary and complex, shaped by access to devices, teacher readiness, professional development, institutional Support, and pedagogical approaches. International and local studies consistently show that digital tools, particularly Apple technologies, enhance learner engagement, creativity, collaboration, and motivation, while also providing opportunities for more personalized, student-centered instruction (UNESCO, 2023; Hariramani, 2025; Nguyen et al., 2021; Ali et al., 2023). However, successful integration requires more than simply providing devices; teachers must possess the knowledge and confidence to apply technology in pedagogically meaningful ways effectively. Frameworks such as TPACK, the Diffusion of Innovations, and Constructivist Learning Theory provide valuable lenses for understanding these dynamics. TPACK highlights the intersection of content, pedagogy, and technology as crucial for designing effective lessons (Mishra & Koehler, 2006; Valtonen et al., 2022), while Diffusion of Innovations Theory emphasizes the role of institutional Support, perceived benefits, and peer influence in adoption patterns (Rogers, 2003; Cobanoglu & Yildirim, 2022). Constructivist approaches illustrate how technology can facilitate active, experiential, and collaborative learning

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experiences that promote critical thinking and real-world application (Piaget, 1936; Vygotsky, 1978; Beetham & Sharpe, 2019).

In the Philippine context, studies demonstrate both progress and persistent challenges. Government initiatives such as the Digital Rise Program and DepEd Commons provide infrastructure and Support for blended learning (Department of Education, 2024), yet inequities in access, digital literacy, and professional training remain, particularly in rural areas (PNU Research Center, 2022). Research further highlights that professional development is most effective when it is continuous, collaborative, and linked to practical classroom tasks, as exemplified by the Apple Teacher Certification program (Hennessy et al., 2022; Power Mac Center, 2025). Local studies in Laguna and Batangas reveal that teachers who receive structured training and ongoing mentorship experience increased confidence, creativity, and student participation when integrating Apple technologies into their lessons (De Guzman, 2023; Pascual, 2024). These findings suggest that technology alone is insufficient; teachers' lived experiences, perceptions, and pedagogical practices critically determine the success of educational innovations.

Despite these insights, gaps remain in understanding how technology integration manifests in provincial public schools, such as those in Bataan, where localized initiatives by the LGU and partner organizations may offer unique contexts and challenges. Existing literature largely focuses on urban or higher education settings, leaving the experiences of rural teachers underexplored. This highlights the need for research that captures authentic teacher narratives, examines day-to-day classroom realities, and investigates how professional development, technology adoption, and institutional Support interact in localized settings. By addressing this gap, the present study aims to provide nuanced, context-specific insights that can inform policy, guide training programs, and contribute to effective, sustainable technology integration strategies.

Ultimately, the reviewed literature establishes that integrating technology into education is a multidimensional process that cannot be understood solely through quantitative metrics or generalized interventions. The synthesis of international frameworks, national programs, and local experiences demonstrates that teacher readiness, contextualized professional development, and reflective pedagogical practices are central to maximizing the potential of educational

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technologies. This study seeks to deepen understanding of how Apple technologies are implemented and experienced by public school teachers in Bataan, offering practical implications for enhancing instructional quality, supporting teacher growth, and promoting equitable access to technology-enabled learning opportunities.

II. METHODOLOGY

Braun & Clarke's Reflexive Thematic Analysis framework was utilized with a qualitative phenomenological research design in this study to describe the lived experiences of elementary public school teachers from the Division of Bataan who have experienced cognitive, pedagogical, and emotional transformation (RTA). The Purpose of the research was to understand how public school teachers incorporated Apple Technologies into their Teaching Practice through Technology Integration.

Phenomenology helped capture the meaning that teachers assigned to their experiences with Technology Integration and Professional Adaptation. Reflexive Thematic Analysis enabled researchers to systematically identify, interpret, and develop themes based on participants' accounts and recognize their interpretive role in the data collection/analysis process.

This study is focused on the lived experience of twelve (12) elementary public school teachers from the Division of Bataan who received a MacBook Air from the Local Government of Bataan and who have received training and Apple Teacher Certification. A purposive, multi-cohort sampling strategy was employed to classify the participants into four (4) cohorts based on the following characteristics: Cohort 1 - Teachers with 1-5 years of experience who have received an Apple Teacher Certification and are currently using Apple Technologies in their classroom; Cohort 2 - Teachers with 1-5 years of experience who are certified but do not use Apple Technologies in their classroom (use them minimally or inconsistently). Teachers in Cohort 3 were able to use technology appropriately in their teaching because they had 5 or more years of experience and were certified by Apple. Cohort 4 consisted of teachers with 5 or more years of experience and held the appropriate certification by Apple, but did not use the technology in the classroom consistently.

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Data was collected by two very different instruments: a pre-survey that consisted of open-ended questions and semi-structured, in-depth interviews. The pre-survey addressed background demographic information and teachers' reflections prior to entering the Apple Teacher Certification process. The semi-structured interviews provided insight into the teacher's experiences with technology, challenges the teacher faced along their journey to becoming an Apple Teacher, changes that took place in the teacher's identity because of being certified as an Apple Teacher, and the types of instructional practices that are facilitated through the Apple Teacher Certification program.

The research instruments were validated by research experts before data collection. The instruments also underwent a pilot study as a method of testing for relevance, validity, and appropriateness for use to collect data. While conducting the study, the researchers adhered to all ethical research guidelines. Participation in the study was strictly voluntary; all participants provided their informed consent, and confidentiality was maintained by assigning the participant a code and storing the data in a secure location. The participants also retained the right to withdraw from the study at any time.

All interviews were audio taped with the consent of participants, and separated into verbatim transcripts. The researcher utilized both member checking and scouted notes to improve the reliability and validity of the data collected.

Data analysis was conducted using Braun and Clarke’s Reflexive Thematic Analysis process to analyze the data for phenomenological research. The process included: becoming familiar with the data from the interviews, coding the data, using the codes developed to develop themes from the data set, reviewing the themes developed to make sure they accurately reflect the findings, refining the final list of themes generated from the data collection process, and then interpreting the final output from the data analysis procedures.

The study included only those teachers who successfully completed the structured training at Basecamp, received the Apple Teacher Certificate, and had direct contact with the Apple devices and applications in their classrooms. Any teacher who had not completed both the training and certification, or had completed either the training or certification but did not have previous

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experience, supported the premise that their experience through Basecamp would not provide an adequate depth of reflection for this phenomenon.

The data collected consisted of the reflective narratives obtained from the teachers during both the pre-survey and semi-structured, in-depth interviews, and provided insight into the teachers' perceptions regarding their professional transformation, pedagogical changes, and their identity changes.

III. RESULTS AND DISCUSSION

The results of the study consistently demonstrate that professional learning is most effective when it is iterative, reflective, and embedded in teachers' lived classroom contexts rather than delivered as isolated training events. This empirical orientation directly aligns with constructivist theory, which views learning as an active process of meaning-making shaped by experience and reflection. Within RPSI, teachers do not passively receive technological knowledge; instead, they construct pedagogical understanding through ongoing engagement, experimentation, and reflexivity. From a Diffusion of Innovation perspective, this sustained engagement enables teachers to move beyond initial Awareness and persuasion toward the implementation and confirmation stages. At the same time, TPACK is developed holistically as teachers continuously negotiate the relationships among content, pedagogy, and technology in authentic instructional settings.

Recent work by Bates and Sangrà (2023) reinforces this alignment by arguing that digital technologies yield meaningful learning outcomes only when intentionally aligned with pedagogical purpose rather than treated as add-ons. This insight directly substantiates the Pedagogical Integration phase of the RPSI framework, where teachers translate technological affordances into learner-centered instructional designs. Theoretically, this phase reflects constructivist pedagogy, as technology is used to Support inquiry, collaboration, and knowledge construction rather than content transmission. Within TPACK, this phase represents the point of convergence at which technological knowledge is pedagogically enacted in discipline-specific ways. From a Diffusion of Innovation lens, pedagogical alignment increases the perceived relative

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advantage and compatibility of technology, accelerating adoption and deepening teachers' commitment to sustained use.

Empirical studies focused on Apple-supported professional development conducted within the Philippine context further reinforce the defensibility of the RPSI framework. De Guzman (2023) and Pascual (2024) report that Apple-certified educators demonstrate heightened confidence, creativity, and instructional engagement when continued coaching and opportunities for classroom application accompany professional development. These findings closely mirror the Cross-Cohort Essence identified, where participants described professional growth as experiential, reflective, and sustained rather than episodic. Theoretically, these outcomes are consistent with constructivism, as teachers' expertise develops through situated practice and reflective sense-making. In terms of TPACK, ongoing application enables teachers to refine the dynamic interplay among technology, pedagogy, and content over time. From the Diffusion of Innovation perspective, such Support structures reduce uncertainty and trialability concerns, enabling teachers to move confidently from early adoption toward routine, normalized use.

The RPSI framework's emphasis on peer mentoring, collaborative learning communities, and systemic Support is further validated by recent research highlighting the role of collegial interaction in sustaining pedagogical change. Motto (2021) and Bartle et al. (2025) demonstrate that instructional coaching and collaborative professional cultures significantly strengthen teachers' capacity to enact technology-integrated pedagogy. These findings empirically substantiate the Systemic Integration phase of RPSI, which positions sustainability as an organizational condition rather than an individual burden. From a constructivist standpoint, professional knowledge is co-constructed through dialogue, shared reflection, and communal practice. Within TPACK, collaboration supports the social negotiation of pedagogical strategies and technological uses across contexts. From the Diffusion of Innovation framework, such communities function as social systems that normalize innovation, reinforce shared norms, and facilitate the confirmation stage of adoption.

Taken together, these recent empirical studies strengthen the validity and defensibility of the RPSI framework, demonstrating that it is not an abstract or prescriptive model but a theoretically grounded and empirically supported representation of teachers' lived experiences.

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Work's phased structure reflects constructivist learning processes, its progression mirrors the stages of innovation diffusion, and its core focus on pedagogical enactment operationalizes TPACK in practice. Consequently, RPSI offers a credible, research-informed framework for understanding how Apple-certified teachers move from reflective sense-making to sustained, system-level pedagogical transformation.

IV. CONCLUSION

According to the findings of this study, being recognized as an educator using Apple technology was not only about gaining expertise in technical aspects, but also served as a meaningful experience for teachers throughout their professional journey, providing growth opportunities, facing challenges, and ultimately transforming the way they thought about themselves as educators. When teachers transitioned from more traditional pedagogies toward more student-centered, technology-enhanced pedagogies, they were required to develop not only the skills/familiarity with various digital tools but also build their confidence, become adaptable, and have the willingness to try new things within their instructional practice.

Moreover, the quality of training provided by Apple, combined with access to ongoing practice and classroom enactment, contributed significantly to a teacher's overall experience/level of support. Teachers whose training provided continuous support and opportunities to apply their learning in their practice reported feeling more confident in how to integrate technology meaningfully than those teachers who only had limited opportunities for practicing, where they then faced challenges with respect to using technology in their teaching.

Along with the quality and type of training, almost all of the teachers interviewed echoed the importance of collaboration/formal peer-to-peer support and reflective practice in maintaining their continuing professional growth toward becoming Apple-certified educators. These teachers shared their experiences, illustrating how effectively integrating technology into their teaching and their work as educators is not something that can happen overnight, but rather, a process that is gradual and ongoing, due to their own efforts, institutional support, and working in authentic classrooms.

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The data collected throughout this project indicates that the experiences of teachers, as Apple-certified educators, are complex in nature and contingent upon where they work, how they have been trained to integrate technology into their teaching, and how they have applied that learning into their practice over time. Therefore, there are many factors that influence how/what constitutes technology integration, which include professional development opportunities that are sustainable, practice-oriented, and responsive to the needs of the educator, thereby supporting them in transforming their teaching practice and professional identity.

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