Developing Pre-Service Teachers' Writer Identity with Digital Reflective Practice Through Identity Journey Mapping

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The development of a strong writer identity is crucial for pre-service teachers in the digital age because writing supports instruction, professional communication, reflective learning, and personal expression. This qualitative case study examines how a set of digital reflective practices—structured guided reflections, writing portfolio development, and writer identity journey mapping—supports writer identity development among pre-service teachers in a teacher education program at a northeastern private university. Across the semester, participants' evolving writer identities were traced through their reflective narratives and multimodal artifacts, attending to shifts in agency and authorship, voice and stance, and senses of belonging as writers. Findings suggest that intentionally scaffolded digital reflection can function as an identity-building infrastructure, enabling pre-service teachers to narrate, curate, and re-author their trajectories as writers while clarifying their emerging commitments as future teachers of writing.

Keywords: pre-service teacher, writer identity, digital reflective practice, identity journey mapping

INTRODUCTION

The development of a strong writer identity is crucial for pre-service teachers in the digital age. Writing is not only a fundamental skill for teaching but also a vital component of professional communication and personal expression. Writing extends beyond basic communication; it serves as a core medium for professional expression, critical reflection, and pedagogical development (Reid, 2009; Kline & Kang, 2022). As future educators, pre-service teachers with strong writing skills could facilitate developing confidence, purpose, and reflective practices to effectively support their students. Amid increased emphasis on reflective teaching and digital pedagogies, teacher education programs are expected to foster writing experiences that promote confidence, agency, and self-awareness (Gardner & Kuzich, 2024; McKay, 2021). When pre-service teachers develop a strong writer identity, they are more likely to cultivate a classroom environment that values writing as both a cognitive and expressive act. This is particularly vital in an era where multimodal and digital literacies are becoming standard expectations for 21st-century learners (Mirra & Garcia, 2021). This study investigates how structured digital reflective practices—including guided journaling, portfolio development, and the use of identity journey maps—

can support the development of writer identity among pre-service teachers in a teacher education program at a private university in the northeastern United States. By centering reflective practice in a digital environment, this research aims to uncover the pedagogical affordances of digital tools in shaping writing self-concept and professional identity.

BACKGROUND

THE IMPORTANCE OF WRITING FOR PRE-SERVICE TEACHERS

Writing is central to the work of teaching, encompassing a broad range of communicative, cognitive, and reflective skills essential for effective practice. In teacher education, writing serves both functional and transformative purposes. It allows pre-service teachers to engage in lesson planning, curriculum design, professional correspondence, and academic writing—while also supporting reflective engagement with their own learning and pedagogical beliefs (Chase, Morabito, & Abrams, 2020; Hodges et al., 2021). Strong writing skills are crucial for professional development, educational research, grant writing, and contributing to educational discourse. With the adoption of data-driven teaching practices, teachers often engage in action research (Mertler, 2009; Arefian, 2022) and partnership research (Cole & Knowles, 1993). Writing proficiency also supports the integration of technology into education, enabling the creation of clear instructional materials and the communication of complex ideas (Hodges, Wright & McTigue, 2021; Rouse, Young, & Gifford, 2023). Thus, advanced writing abilities prepare pre-service teachers for effective and innovative teaching.

Recent research underscores that strong writing skills are integral to broader professional competencies, including action research, classroom assessment, and the integration of educational technologies (Rouse, Young, & Gifford, 2023). Moreover, with the increasing focus on data-informed teaching and evidence-based practice, the ability to write clearly and persuasively is critical for teacher accountability and advocacy (Chang & Menzies, 2022). As digital platforms reshape communication in educational settings, writing has expanded into multimodal forms that require fluency in both text and technology (Kajder & Parkes, 2012; Yilmaz & Akar, 2024). Thus, the development of robust writing practices in teacher preparation is foundational for fostering professional growth and instructional effectiveness.

WRITING IDENTITY AND WRITING EFFICACY FOR PRE-SERVICE TEACHER

The concept of writing identity—the extent to which individuals perceive themselves as capable, authentic writers—is increasingly recognized as a key component in teacher education. Developing a writer identity is not merely about skill acquisition; it involves internalizing the role of a writer, navigating emotional and cognitive barriers, and constructing a sense of authorship that is aligned with professional identity (Rahman, Handrianto, Kenedi, Ilhami, & Ghafar, 2024). This process enables pre-service teachers to see themselves not just as educators but also as *active participants in the practice of writing*. It's about internalizing the role of a writer, which can significantly influence their teaching style and their ability to inspire students to write. This cultivation happens through a period of time and it takes dedication and effort with careful pedagogical designs. The development of writing efficacy and identity is paramount in the professional growth of pre-service teachers. Writing efficacy, the belief in one's own ability to write effectively (Bandura, 1997), is crucial as it directly influences their confidence and competence in teaching writing skills to students.

For pre-service teachers, writing identity significantly impacts how they approach teaching writing in their own classrooms. Teachers who see themselves as writers are more likely to implement writing-rich pedagogy and foster a writing culture among their students (Carter & Townsend, 2022). Writing efficacy, defined as confidence in one's ability to write effectively (Bandura, 1997), is closely tied to this identity. A growing body of research emphasizes that increased writing efficacy correlates with higher engagement in reflective writing, stronger instructional planning, and deeper critical thinking (Awidi & Klutsey, 2025; Han & Wang, 2021; Teng & Yue, 2023; Zou et al., 2023). Cultivating a writing identity is complex as it requires sustained opportunities for meaningful writing, supportive feedback, and pedagogical designs that acknowledge the emotional and social dimensions of writing development. Teacher educators would be expected to intentionally design coursework that helps students navigate writing anxiety, develop their voice, and see writing as a professional tool rather than an academic hurdle.

DIGITAL REFLECTIVE PRACTICES THROUGH IDENTITY JOURNEY MAP

Digital reflective practices offer new opportunities to support writing identity formation, especially when designed to be interactive, multimodal, and personally meaningful. Technologies such as blogs, e-portfolios, and collaborative writing platforms have been shown to enhance student engagement and deepen reflection (Barrett, 2007; Jimoyiannis & Angelaina, 2012; Zou et al., 2023). These tools allow for dynamic representations of learning and identity development, making the reflective process more accessible and relevant for digital-native pre-service teachers. Through consistent writing exercises, feedback from peers and instructor, and introspection about their writing process, pre-service teachers can build a strong, personal writing identity. This identity not only shapes their teaching practices but also empowers them to instill a love and respect for writing in their future students. An identity journey map is a visual representation that documents an individual's developmental journey, highlighting key experiences, milestones, challenges, and achievements. Identity journey maps serve as powerful tools for reflecting on and understanding their evolving writer identities, as they provide a tangible way to track growth, make connections between experiences, and articulate the multifaceted nature of identity development.

The use of identity journey maps—visual, narrative-based representations of personal and professional growth—has emerged as a particularly effective strategy. These maps serve as cognitive artifacts that help pre-service teachers trace the evolution of their writer identity over time, often highlighting turning points, struggles, and transformative moments (Cho & Hayes, 2024). Through guided digital reflections and iterative storytelling, identity journey maps allow participants to connect personal experiences to professional aspirations, creating a more integrated sense of self as both writer and educator. They also provide valuable insights for instructors, offering a window into the hidden emotional and cognitive dimensions of writing development.

In sum, digital reflective practices—particularly when integrated with visual mapping tools—can play a transformative role in supporting writing identity and efficacy. This research aims to build on this emerging body of work by exploring how these practices influence pre-service teachers' perceptions of themselves as writers, and how those perceptions impact their emerging professional identities.

THEORETICAL FRAMEWORK AND PURPOSE OF THE STUDY

This study examines a semester-long writing course for pre-service teachers that positions becoming a writer as integral to learning to teach writing. This emphasis responds to research suggesting that pre-service teachers often negotiate complex and sometimes conflicted writing-related identities that shift across contexts and roles. For example, del

Calvo and Guillotte's (2025) multiple-case study of secondary social studies teacher pre-service teachers documented recurring tensions in pre-service teachers' writing-related role identities, indicating that writer identity development can be uneven and shaped by perceived legitimacy and positioning as writers.

The study is grounded in the perspective that writing is an act of identity, shaped by writers' histories and the social positions available to them in particular contexts. Ivanič's (1998) framework informs the analysis by conceptualizing identity through the *autobiographical self* (prior experiences and writing histories), *the discoursal self* (how the writer is performed in text), and *the self-as-author* (agency, authority, and ownership). Framing the course through this lens makes writer identity an explicit learning outcome rather than an assumed byproduct of skill development. Pedagogically, the course leverages digital reflective practice—guided reflections, portfolio building, and identity journey mapping—to make identity work visible, revisable, and cumulative across the semester. Digital reflections support ongoing sense-making; portfolios invite curation and justification of growth; and identity journey maps provide a multimodal account of identity trajectories and turning points. Methodologically, writer identity is measured qualitatively by analyzing reflections, portfolio narratives, and identity maps as longitudinal "identity texts." Analysis attends to observable indicators aligned with Ivanič's constructs (e.g., re-storying writing histories, shifts in voice/stance, and strengthened claims of agency and authorship) and uses systematic coding across early–mid–late course phases, supported by analytic memos and triangulation across artifact types.

Accordingly, the overarching research question guiding this study is: *What are pre-service teachers' journeys in developing writer identity through digital reflective practices, including digital reflections, writing portfolios, and identity journey maps?*

METHODS

CONTEXT AND PARTICIPANTS

This study employs a qualitative case study approach (Yin, 2009) to enable an in-depth examination of pre-service teachers' experiences and meaning-making as they engaged in weekly digital reflections, peer interactions, portfolio building, and writer identity journey mapping within a writing-intensive, semester-long course. Participants included four (4) pre-service teachers enrolled in the course during the study semester. IRB approval was obtained for this study, and all participants provided informed consent. Demographics of the participants are provided in Table 1.

Table 1. Demographic Information for Participants

Name (pseudonyms)	Gender	Year in College	Teaching Concentration
Student 1 Tina	F	Junior	Childhood
Student 2 Betty	F	Junior	Childhood
Student 3 Emma	F	Junior	Secondary Science
Student 4 Violet	F	Senior	Childhood

PROCEDURES, DATA COLLECTION & DATA ANALYSIS

Data collection occurred throughout the semester and centered on course-embedded reflective and composing practices. The primary data sources included (a) weekly digital reflection journals, (b) writing portfolio submissions (drafts, revisions, and reflective cover letters/rationales), (c) digitalized posters/identity journey maps (multimodal

representations of identity trajectories with accompanying written explanations), and (d) participants' reflections regarding their identity claim.

Measurement and Data Coding. In this study, writer identity was measured qualitatively, focusing on two areas: 1) instructor-coded writing confidence to trace identity development over time, and 2) evidence of identity-related beliefs and positioning—such as agency/ownership (for example: "I can make writing decisions"), voice and stance, belonging and legitimacy (for example: "I am/is not a writer in this space") through artifacts analysis. For area 1, instructor-coded writing confidence, it was collected through instructor-researcher assigning a 1–5 confidence code based on evidence in pre-service teachers' digital reflections (and, when referenced, related writing artifacts). Codes ranged from 1 (disidentified/avoidant positioning) to 5 (authorial/sustained positioning), with mid-range codes capturing conditional or situational confidence (see Table 2). The rubric was aligned with Ivanič's (1998) constructs by attending to how pre-service teachers narrated their writing histories (autobiographical self), articulated voice/stance and rhetorical intentions (discoursal self), and claimed authority, ownership, and decision-making as writers (self-as-author). For aera 2), the researcher conducted thematic analysis (Braun & Clarke, 2006) using an iterative procedure on the artifacts. First, open coding identified identity statements, confidence markers, and recurring experiences. Next, axial coding connected these codes into higher-order categories representing identity development (e.g., agency and authorship, stance/voice, belonging). The writing portfolio was then analyzed to triangulate whether identity themes evident in reflections were observable in writing products and portfolio rationales—such as evidence of rhetorical decision-making, revision agency, audience awareness, and ownership of goals. Finally, identity journey maps and reflections were used to corroborate and extend the trajectory findings by highlighting turning points, visual metaphors of change, and participants' explanations of how course experiences shaped their writer identities.

Table 2. Instructor-Code Writer Identify Confidence Rubric

Instructor-coded confidence	Descriptor	Exemplar reflection indicators (evidence)
1 (Very low)	Disidentified / avoidant positioning	Deficit/distancing language ("I'm not a writer," "I can't"); writing framed as threat or failure; high dependence on external rules; avoids risk; resists revision or treats it as punishment/correction; feedback read as proof of inadequacy.
2 (Low)	Fragile / conditional positioning	Tentative engagement with persistent doubt; choices driven mainly by "what the instructor wants"; minimal experimentation; revision occurs but is mostly surface-level or compliance-driven; feedback received anxiously and used inconsistently.
3 (Developing)	Situational / transitioning positioning	Mixed stance (struggle + growth); confidence fluctuates by task/genre/audience; begins naming strategies and goals; partial ownership of decisions; revision becoming more purposeful; feedback increasingly used to guide changes.
4 (Confident)	Agentive / intentional positioning	Clear agency and explanation of choices (purpose/audience); measured risk-taking; revision framed as meaning-making; feedback evaluated and selectively integrated; identity claims suggest legitimacy and emerging voice ("I'm becoming a writer").
5 (High)	Authorial / sustained positioning	Strong ownership language ("I chose…," "I'm aiming to…"); intentional rhetorical risk; strategic revision for impact; feedback engaged critically and productively; self-directed goals; durable belonging/legitimacy and future projection ("as a writer and future teacher of writing…").

RESULTS

The analysis of the data collected from the weekly reflection journals, digital portfolios, identity journey maps, revealed several key themes related to the development of writer identity among pre-service teachers.

THEME 1: CONFIDENCE GROWTH AS IDENTITY REPOSITIONING

All participants reported a marked increase in their confidence and comfort with writing over the course of the semester. This shift was consistently observed across individual identity reflections. Table 3 illustrates each student's writing confidence on a scale from 1 to 5 (with 5 being the highest) as coded by the instructor with evidence from weekly reflection.

Table 3. Weekly Reflection Themes with Confidence Level

	Student 1- Tina	Student 2-Betty	Student 3-Emma	Student 4-Violet
Week 1	Initial self-doubt and lack of confidence (Confidence Level: 1)	Initial stress and feeling lost in writing (Confidence Level: 1)	Recognition of value in reading and writing (Confidence Level: 2)	Goal to become more aware of writing style (Confidence Level: 2)
Week 2	Improved comfort in writing (Confidence Level: 2)	Improved detail and focus <u>in</u> writing (Confidence Level: 2)	Understanding cultural diversity in writing (Confidence Level: 3)	Reflective writing and purposeful writing (Confidence Level: 3)
Week 3	Easier time starting writing (Confidence Level: 3)	Better understanding of applying observed skills (Confidence Level: 3)	Attention to detail and analytical skills (Confidence Level: 3)	Culturally responsive pedagogy (Confidence Level: 3)
Week 4	Continued improvement in writing skills (Confidence Level: 4)	More secure and guided in writing (Confidence Level: 4)	Transcultural identity and inclusivity (Confidence Level: 3)	Analytical skills and tone/style consideration (Confidence Level:
Week 5	Writing about familiar topics became easier (Confidence Level: 4)	Exposure to transcultural education (Confidence Level: 3)	Integration of writing components (Confidence Level: 4)	Global identity and local culture (Confidence Level: 4)
Week 6	Observing classrooms helped make concrete connections in writing (Confidence Level: 4)	Insights from classroom observations (Confidence Level: 4)	Student empowerment and social media impact (Confidence Level: 4)	Discussion and reflection importance (Confidence Level: 4)
Week 7	Technology aided faster idea flow (Confidence Level: 5)	Diverse classroom dynamics influenced writing (Confidence Level: 4)	Effort in evidence-based writing (Confidence Level: 4)	Empowering student voices (Confidence Level: 4)
Week 8	Creative expression through portfolio development (Confidence Level: 5)	Social media's role in writing (Confidence Level: 4)	Portfolio development and reflective practices (Confidence Level:	Social media influence on writing (Confidence Level: 4)
Week 9	Recognition of growth through gallery walk activity (Confidence Level: 5)	Feedback utilization and stronger standpoint (Confidence Level: 5)	Creative expression through portfolio insights (Confidence Level: 5)	Portfolio development and final reflections (Confidence Level: 5)
Week 10	Increased confidence and self-assessment (Confidence Level: 5)	Portfolio development insights and final reflections (Confidence Level: 5)	Engagement and community through gallery walk (Confidence Level: 5)	Goal achievement and growth as a writer (Confidence Level: 5)

At the beginning of the semester, participants' reflections showed self-doubt, anxiety, and uncertainty about writing tasks—patterns consistent with low instructor-coded confidence (Levels 1–2) and limited access to self-as-author. Tina (Student 1) entered the course with low confidence, expressing a preference for math due to its clear right and wrong answers. This positioned writing as ambiguous and evaluative, limiting perceived control over success. Through repeated reflection and feedback, Tina's reflections increasingly included agency markers (naming strategies, explaining choices, and framing revision as purposeful), indicating stronger ownership and movement toward higher confidence. By the end of the semester, Tina's confidence had increased substantially, supported by final reflections and portfolio evidence that indicated more intentional composing and improved writing outcomes.

Betty (Student 2) likewise began from a low-confidence position, describing feeling overwhelmed and unable to begin: "*Almost immediately, I was extremely stressed because I felt that I did not know what to look for within my observations and that I did not even know where to begin for my writing, so it felt like it took me longer to begin my writing.*" As she engaged with structured writing activities and reflection routines, her positioning shifted from uncertainty to a clearer sense of process ownership. By Week 9 she reflected: "*Now as a writer, I feel that I am definitely in a stronger, more knowledgeable standpoint and I have gotten much more comfortable with writing and the processes that are within.*" This statement was coded as increased authorial positioning because it signals not only comfort but strengthened control over writing processes—consistent with movement toward Level 4 confidence. Similar upward trajectories were evident for Emma (Student 3) and Violet (Student 4), both of whom reported increased comfort and confidence by the end of the semester.

Overall, Figure 1 shows students' progression of writing confidence over time as coded by instructor on their weekly personal reflections. Theme 1 along with the results from Figure 1 reflects growth in self-as-author: participants increasingly framed writing as something they could shape through decisions, revision, and intention, rather than something imposed or judged externally.
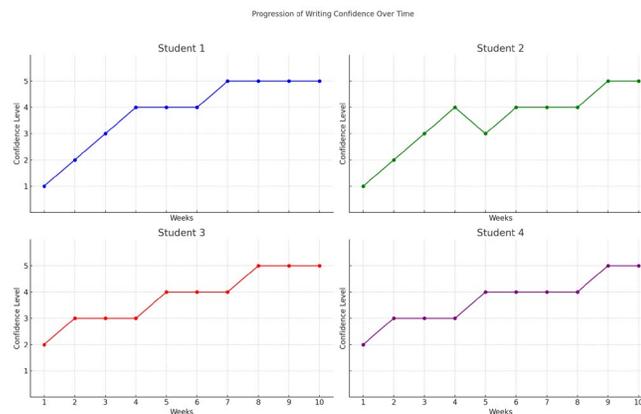

Figure 1. *Instructor Coded-Students' Progression of Writing Confidence Over Time*

THEME 2: PURPOSEFUL AND REFLECTIVE WRITING: DISCOURSAL SELF AND SELF-AS-AUTHOR

Pre-service teachers began to conceptualize writing not only as a means of communication but also as a tool for expressing identity, understanding experience, and supporting pedagogical intent. This shift was evident across participants and reflected their evolving perceptions of the value and purpose of writing in educational contexts.

Early reflections frequently focused on requirements and correctness; later reflections increasingly articulated purpose, audience, and values. This shift was especially evident in Violet's reflections as she connected reflective writing to culturally responsive teaching: "*I have developed some concrete meanings for this reflective style. I want to be able to use culturally relevant texts and assignments in my class because I have seen how beneficial they are to all students.*" Violet's language represents an identity shift in which writing becomes a tool for articulating commitments and enacting pedagogical intent, not merely fulfilling a course obligation.

Across participants, purposeful writing was evidenced when pre-service teachers named what they wanted their writing to *do*(e.g., communicate insight, document learning, support students), used reflection to interpret experiences rather than simply report them, and connected writing practices to future classroom applications. Portfolios reinforced this theme by requiring pre-service teachers to justify artifact selection and narrate growth, which prompted more explicit articulation of purpose and significance.

Theme 2 reflects changes in the discoursal self, i.e. how writers project stance, values, and intention; and strengthens self-as-author, because purpose increases ownership—writers claim reasons for their choices and meanings.

THEME 3: ENHANCED ANALYTICAL SKILLS

The ability to analyze teaching actions and student responses improved, deepening students' understanding and writing quality. For example, Emma developed enhanced analytical skills by connecting observations to learning theories, enriching her reflective practices. Similarly, Betty's ability to analyze and write about observations in greater detail improved over the semester, when she reflected : "*One of the strengths of my writing that has been evidenced by my work is the fact that I am able to back up my reasoning and explanations within my writings very well.*" This enhancement was due to structured guided reflection and peer-interaction activities that allowed students to critically examine their writing processes and teaching practices. Betty also emphasized the importance of real-world connections, such as observing diverse classroom dynamics, in shaping her writing practices.

Another prominent theme was the development of analytical skills related to both writing and teaching. Participants improved their ability to connect classroom observations with broader educational theories, thus enriching the depth and insight of their reflective writing. For example, Emma explicitly linked her field experiences with learning theories, which enhanced the substance of her reflections. Similarly, Betty noted an improvement in her ability to support arguments with evidence: "*One of the strengths of my writing that has been evidenced by my work is the fact that I am able to back up my reasoning and explanations within my writings very well.*" This analytical growth was facilitated by structured guided reflections, peer feedback sessions, and iterative writing assignments. Betty also emphasized the role of real-world exposure, such as observing diverse classroom environments, in developing her critical thinking and writing depth.

THEME 4: VISUALLY-GUIDED REFLECTION FACILITATES WRITER IDENTITY BUILDING

Developing portfolios and engaging in reflective practices were crucial for the students' growth as writers. Pre-service teachers appreciated the opportunity to organize and present their work creatively, which boosted their confidence and helped them recognize their progress. For example, Tina was drawn to visually appealing and creatively organized portfolios and planned to incorporate similar elements into their own portfolio. In their personal identity map of their writing journey, each student showed their personalities and identities as a write in each of their own way. Figure 2, 3, 4, and 5 shows the four different

identity map from each student. The final theme highlights the value of visual and creative reflection tools—particularly portfolios and identity journey maps—in fostering writer identity. Pre-service teachers responded positively to opportunities for organizing and presenting their work creatively, which helped them visualize their growth and engage with their writing journey in a more personal way. Tina, for example, expressed a strong connection to the visual components of her portfolio and planned to implement similar practices in her future teaching: "*One thing I would love to implement in my classroom is a place for students to complete these informal assessments. Creating personalized writing journals is a way for students to feel supported when writing in the classroom.*"
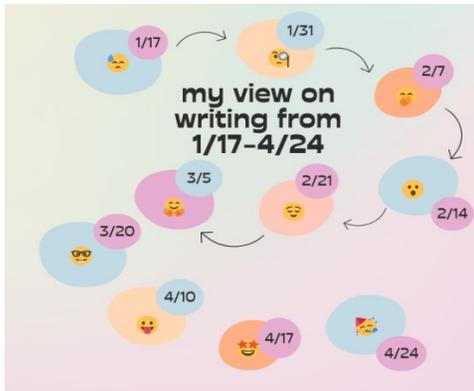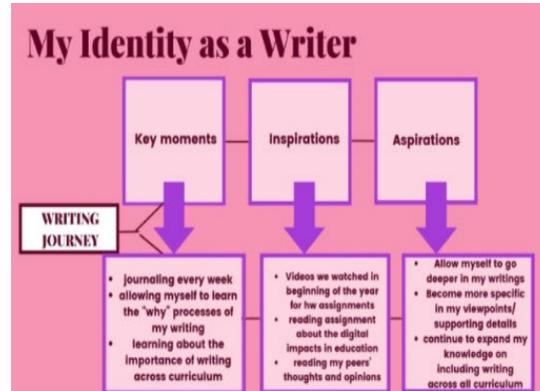

Figure 2. *Tina's Identity Map*

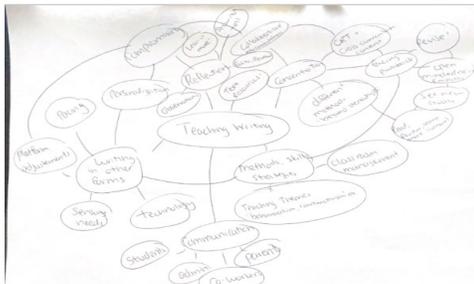Figure 3. *Betty's Identity Map*
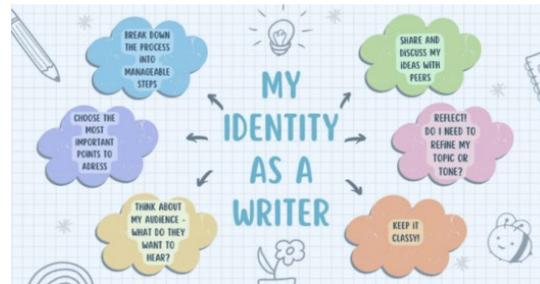

Figure 4. *Emma's Identity Map*

Figure 5. *Violet's Identity Map*

The creation of identity journey maps allowed students to visually summarize their learning journeys. By doing so, Tina shared that she would like to adopt a similar approach to her future teaching when she shared that "*One thing I would love to implement in my classroom is a place for students to complete these informal assessments. Creating personalized writing journals is a way for students to feel supported when writing in the classroom.*" These maps helped students reflect on their progress, identify key milestones, and communicate their development in a creative and engaging way, as well as recognizing their growth and areas for improvement.

DISCUSSION

The results of the study shows writer identity development as a longitudinal process rather than a single outcome. Across the semester, pre-service teachers' reflections, portfolios, and identity journey maps documented a shift from tentative or compliance-oriented writing toward increasingly agentive, purposeful, and professionally situated composing. Importantly, these changes were not limited to improved writing products; they were evidenced in how pre-service teachers positioned themselves as writers—how they

narrated their writing histories, performed stance and judgment in text, and claimed (or resisted) authority and ownership. Using Ivanič's (1998) framework, the themes collectively suggest that digitally mediated reflective practice created the conditions for identity work by making growth visible and revisable across time.

The observed increases in instructor-coded writing confidence echo Dewey's (1933) and Schön's (1983) longstanding claims that reflective practice is central to professional learning, particularly when reflection is structured, iterative, and tied to action. Across cases, pre-service teachers began the semester positioned as hesitant or avoidant writers—typified by Tina's preference for mathematics and Betty's admission of feeling "extremely stressed." However, over time, regular guided reflections created repeated opportunities for pre-service teachers to examine their composing decisions. This shift away from anxiety and toward capability directly addresses the "emotional and cognitive barriers" described by Rahman et al. (2024), effectively allowing students to internalize the writer role essential for their professional identity. From a self-efficacy perspective (Bandura, 1997), this matters because confidence is built through interpretable evidence of capability. This study's findings validate recent research suggesting that writing efficacy is not merely a emotional metric but a critical driver of professional competence; as noted by Awidi and Klutsey (2025) and Han and Wang (2021), increased efficacy correlates directly with stronger instructional planning and deeper critical thinking.

Beyond confidence, the nature of the pre-service teachers' writing changed significantly, becoming more purposeful and values-driven. Dewey (1933) conceptualizes reflection as meaning-making rather than mere recollection, and participants began to articulate not only what they wrote, but why it mattered. Violet's transition from task completion to values-driven writing illustrates the claim by Reid (2009) and Kline and Kang (2022) that writing could serve as to facilitate professional expression and pedagogical development. As pre-service teachers developed a sense of purpose, they moved closer to the writing-rich pedagogy advocated by Carter and Townsend (2022). This purposeful stance is a prerequisite for the professional demands; without a strong sense of authorial purpose, pre-service teachers are less prepared to engage in the action research and data-driven practices required in modern schools.

These confidence gains were not purely affective; they were grounded in a stronger discoursal self (Ivanič, 1998), where pre-service teachers' reflections became more interpretive and evidence-based. Emma's theorized connections and Betty's ability to back up her reasoning signal a growth in analytic capacity that directly addresses the need for teachers to communicate complex ideas (Hodges et al., 2021). As pre-service teachers learned to interpret experience and defend their reasoning, they gained the discursive resources necessary for teacher accountability and advocacy (Chase et al., 2020; Chang & Menzies, 2022). This pattern supports the view that analytic growth serves as an identity support; by mastering the language of the profession, participants were able to claim authority in writing, validating the assertion that strong writing skills facilitate the development of reflective practices to effectively support their students (Kline & Kang, 2022).

Finally, the use of multimodal tools—specifically digital portfolios and identity journey maps—supported identity coherence by requiring pre-service teachers to curate evidence and represent development as a trajectory. This mirrors the findings of Rouse, Young, and Gifford (2023) and Kajder and Parkes (2012), who advocated that that modern educational communication requires fluency in both text and technology. By engaging in these multimodal forms (Yilmaz & Akar, 2024), pre-service teachers were able to navigate the complexity of their evolving identities. The identity journey maps allowed participants to visualize the turning points and struggles inherent in their growth (Cho & Hayes, 2024), providing a tangible way to track the multifaceted nature of identity development (Rahman

et al., 2024). Tina's interest in adopting similar reflective structures for her future classroom suggests that this visual-guided reflection promoted pedagogical transfer—linking writer identity to teacher identity. In this way, the maps supported Ivanič's autobiographical self by enabling pre-service teachers to re-story prior writing experiences, while simultaneously preparing them to integrate technology into their own future teaching (Hodges et al., 2021).

Taken together, these findings suggest that digital reflective practices supported writer identity building through a reinforcing pathway: as pre-service teachers gained purpose for writing, they developed stronger analytic and evidentiary writing practices, which in turn supported more stable authorial positioning indexed by instructor-coded confidence. Portfolios and identity journey maps consolidated these shifts into coherent narratives of becoming, strengthening pre-service teachers' capacity to claim legitimacy as writers. For teacher education, the implication is clear: when reflection is designed as an infrastructure—iterative, scaffolded, and multimodal—it strengthens the identity foundations that shape how future teachers will teach writing.

CONCLUSION, IMPLICATIONS AND FUTURE RESEARCH

This study explored how digital reflective practices—specifically identity journey maps and portfolios—influence the writing identity and efficacy of pre-service teachers. The findings indicate that writing identity is not a fixed trait but a malleable construct that can be actively cultivated through specific pedagogical interventions. By positioning writing as an act of identity rather than a mere academic skill, the course helped pre-service teachers move from a stance of compliance and anxiety toward one of agency and professional purpose. The findings highlight the critical role of visual-guided reflection in fostering deeper engagement with reflective practices, promoting an understanding of identity, and supporting the professional development of future educators.

These insights inform teacher education design by highlighting the value of integrated digital reflective tools for preparing pre-service teachers for future teaching demands. The study contributes to writing pedagogy in the digital age and offers actionable implications for educators to strengthen teacher preparation. First, programs could make writer identity an explicit learning outcome rather than assuming it will emerge through skill-based writing instruction; assignments that prompt pre-service teachers to examine their autobiographical writing histories and articulate shifts in stance, agency, and legitimacy can help surface and disrupt emotional and cognitive barriers that constrain participation as writers. Second, teacher educators could incorporate multimodal reflective tools—such as portfolios and identity journey maps—because identity development is nonlinear and multifaceted, and visual composing can function as a cognitive artifact that makes growth, tensions, and turning points more tangible and discussable. In addition, reflection could be designed as a sustained infrastructure rather than an end-of-semester add-on: iterative, scaffolded reflection cycles paired with feedback and peer interaction can support pre-service teachers' analytic reasoning and strengthen self-as-author positioning in ways aligned with reflective practice traditions (Dewey, 1933; Schön, 1983) and with evidence-based professional learning approaches that pre-service teachers can later translate into classroom inquiry and action research.

Future research could include a larger and more diverse participant group and conduct longitudinal studies to examine the lasting impact of guided reflection, portfolio building, and identity journey maps. Comparative studies could also evaluate the effectiveness of different reflective practices and digital tools in developing writer identity across various educational contexts. As digital platforms—and especially generative AI—continue to reshape what writing looks like in educational settings, the need for teachers to hold a

resilient, adaptable writer identity becomes more urgent. Future studies could therefore track the longer-term impact of identity-focused reflective infrastructures: whether pre-service teachers who strengthen self-as-author positioning during preparation sustain that identity in their first years of teaching, and how (or whether) they transfer tools such as portfolios, guided reflection cycles, and identity mapping into K–12 writing instruction under evolving AI conditions.

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