Digital Stories, Real Learning: Narrative Identity, Transformative Learning, and Empowerment from the Storytellers' Perspectives

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Abstract

Digital Storytelling(DST) is widely recognized for influencing audiences, but the transformative experiences of storytellers themselves remain underexplored. This qualitative study examines the impact of creating digital stories on storyteller well-being. It does so by analyzing nine publicly available digital narratives using a multi-theoretical framework that integrates Transformation Learning Theory, Narrative Theory, and Empowerment Theory. Through systematic thematic analysis with inter-rater reliability assessment, narrative reflection, and meaning-making were the most consistently observed themes across stories. At the same time, indicators of transformative learning appeared frequently but with moderate variability, and empowerment outcomes emerged more unevenly and depended on personal context. Results demonstrate that while digital storytelling reliability helps individuals construct coherent narratives and process experiences, its effectiveness in prompting perspective transformation and encouraging agency varies considerably based on individual circumstances and readiness. For educators, business leaders, and practitioners, these findings suggest focusing DST programs on narrative reflection and meaning-making as core outcomes, while recognizing that transformation and empowerment may emerge as secondary benefits depending on participant readiness and context.

Keywords: digital storytelling, transformative learning, narrative identity, empowerment

1. Introduction

In a time of information overload and shortened attention spans, some of the most profound personal transformations are unfolding through brief, three- to five-minute digital stories. A creative method that combines personal narratives with multimedia elements such as images, audio, and video, these stories create emotionally resonant audio-visual clips featuring voice-over narration that cut through the noise and surface deep insight. (Carr, 2010; Couldry, 2008; Lambert, 2013; Mazzoli Smith et al., 2024). Digital storytelling (DST) has emerged as a powerful pedagogical and expressive tool that intersects personal narrative, multimedia technology, and social learning. Its use has expanded across diverse fields, including education, public health, mental wellness, and community development. This study explores how DST influences storyteller well-being by helping individuals reflect, reclaim their voice, and reshape how they see themselves, promoting the kind of deep, reflective learning that can alter the course of an individual's health journey.

The core aim of this research is to conduct a focused secondary analysis of publicly available digital stories to understand how storytellers experience transformative learning and empowerment. The use of public stories is methodologically and ethically viable because they offer authentic, unsolicited narratives that individuals have chosen to share, avoiding researcher-induced biases that can occur in interviews or surveys. Moreover, by using public-domain platforms, individuals have consented to make their narratives accessible and have chosen to share their stories publicly, thereby giving ethical validity to their agency. While a robust body of literature explores the impact of digital storytelling (DST) on audience perceptions and outcomes (Chou et al., 2021), few studies systematically examine how storytellers' own meaning-making and intrapersonal learning processes are represented within the narratives themselves. This leaves a significant gap in understanding the storyteller's perspective. The gap is critical: the very process of crafting and sharing a digital narrative constitutes a powerful form of experiential learning, one that can trigger emotional insight, spark deep reflection, and often lead to a reshaping of personal identity (Mezirow, 1997). Clarifying how these internal processes unfold within the narratives is essential to fully understanding the transformative potential of digital storytelling.

Three primary research questions guide this study:

(Q1)How do storytellers demonstrate transformative learning when reframing personal experiences?

(Q2) How do digital stories show the development of storytellers' personal voice and sense of agency?

(Q3) How do these narratives demonstrate signs of personal shift toward public action?

These questions align with the broader objectives of understanding DST as a participatory and transformative practice, particularly in the realm of health behavior and empowerment.

The significance of this study lies in its contribution to the growing body of literature that frames digital storytelling as a learner-centered approach that supports reflection and meaning-making. Previous research has demonstrated how DST encourages empathy, cultural understanding, and critical consciousness among viewers (Lundby, 2008). However, the inner transformation of storytellers has often remained underexplored. This research addresses that gap by foregrounding storytellers' experiences and offering insights into how DST is associated with enhanced self-reflection and perceived well-being, not just as an external outcome but as a lived process of narrative meaning-making.

In summary, this research situates digital storytelling at the intersection of narrative, identity, and empowerment. By analyzing unsolicited, publicly shared digital stories, the study offers a unique window into authentic, self-directed meaning-making, free from the researcher-induced biases often present in formal study settings. Bridging theory and practice, it not only highlights the inner journeys of storytellers but also deepens our understanding of DST as a transformative tool for learning and wellness.

2. Theoretical Framework

This study employs an integrated theoretical framework combining Transformational Learning Theory, Empowerment Theory, and Narrative Identity Theory to analyze the transformative learning potential of digital storytelling on participant well-being. By focusing on how creating and sharing personal stories affects the storytellers themselves, this approach shifts attention from audience outcomes to the internal changes participants may experience. Existing research on digital storytelling (DST) often centers on influencing public health behaviors, yet it rarely addresses how the process may empower individuals, reshape identities, or trigger personal change. Lohr et al. (2022) highlight that while DST is frequently used to influence health behaviors and literacy, its impact on well-being, particularly from the storyteller's perspective, remains underexplored. This framework brings together key ideas from adult education, psychology, and narrative studies to fill that gap, offering a more holistic understanding of DST's role in promoting well-being.

2.1 Transformational Learning Through Digital Storytelling

Transformative learning theory, developed by Mezirow (2000), describes how adults change their frames of reference through critical reflection on their beliefs, assumptions, and lived experiences. Central to this process is the "disorienting dilemma", a life event or realization that challenges an individual's worldview. This dilemma prompts critical reflection, leading to a reassessment of prior assumptions and, ultimately, a transformed perspective or identity. Other important components include dialogue, self-examination, and the recognition of alternative viewpoints.

Digital storytelling (DST) provides a productive environment for transformative learning. The act of scripting, selecting images, recording one's voice, and assembling a narrative engages participants in critical reflection. This multi-modal process does more than represent memories; it activates them through reinterpretation and creative expression. As Kitchenham (2008) notes, such processes may result in "perspective transformation", a symbol of transformative learning. Robin (2008) further emphasizes that integrating voice, image, sound, and narrative encourages deep engagement and the internalization of new self-concepts.

DST not only supports individual reflection but also promotes skills that facilitate transformation, such as communication, agency, and resilience. These capacities are particularly vital in health and social contexts. Robin (2006) points out that DST builds self-expression and communication skills, enabling participants to articulate complex, often stigmatized experiences. Mazzoli Smith et al. (2024) provide empirical evidence of DST's transformative potential; in their phenomenological study, participants reported emotional healing and a renewed sense of self, reinforcing DST's affective and therapeutic dimensions. Although Transformative Learning Theory (TLT) has been critiqued for its emphasis on rationality and cognitive change, DST, with its affective, expressive, and creative practices, may offer alternative pathways to transformation. This study explores how such nonlinear, emotionally rich processes support personal change, particularly in health-related storytelling.

2.2 Empowerment, Voice, and Narrative Control

Empowerment theory (Zimmerman, 1995) conceptualizes empowerment as both a process and outcome that enhances people's capacity to influence the conditions of their lives. It comprises three dimensions: intrapersonal (e.g., perceived control and self-efficacy), interactional (e.g., critical awareness and understanding sociocultural environments), and behavioral (e.g., concrete actions to exert influence). DST aligns with Empowerment Theory by helping individuals reclaim control over the creation and sharing of their personal narratives. It enables storytellers to determine how their stories are framed, who tells them, and what meanings are emphasized. This is especially significant in medical or social service contexts, where dominant narratives often marginalize personal experience. By giving participants voice and narrative authority, DST supports the interpersonal and interactional components of psychological empowerment.

As individuals script and share their stories, they exercise agency, choosing what to disclose, how to frame events, and what emotional tone to convey. This process can strengthen confidence, self-advocacy, and social connection. Gubrium, Hill, & Flicker (2014) emphasize how DST enables individuals to assert identities beyond clinical or stigmatizing labels.

Empirical research further supports this theoretical alignment. Gucciardi et al. (2019) show that group-based DST enhances chronic illness self-management through knowledge-sharing and social support. Malikhao (2020) positions DST within the broader landscape of social determinants of health, viewing it as a mechanism for behavioral change and health equity. Moreover, Briant et al. (2016) document DST's role in Latino communities as a vehicle for healing, empowerment, and collective identity-building.

These findings illustrate Zimmerman's framework in action. DST not only cultivates critical awareness and reflection (interactional) but also leads to tangible outcomes such as advocacy, self-care, and community engagement.

2.3 Narrative Identity: Re-storying the Self in Health Contexts

Narrative identity theory offers a valuable lens for understanding how digital storytelling (DST) supports identity construction, particularly in the context of illness, trauma, or significant life disruptions. According to McAdams (2001), narrative identity is formed as individuals weave life events into a coherent personal story that provides meaning and continuity over time, a process that becomes especially critical when navigating destabilizing experiences (Frank, 1995). In DST, storytelling is not merely expressive; it is a core mechanism for making sense of the self across time and change. This is reflected in health and wellness research documenting how individuals use storytelling to reconstruct identity after adversity. For example, Mazzoli Smith et al. (2024) found that DST participants reported healing and a renewed sense of self, while Briant et al. (2016) identified "healing narratives" among Latino communities that helped process trauma and reclaim agency. These findings reflect McAdams' concept of a redemptive life story, where painful experiences are reframed as meaningful. Beyond individual growth, narrative identity also plays a relational role in healthcare. Novak et al. (2020) argue that patient narratives help align care with lived experience, while DiFulvio et al. (2016) found that DST interventions increased optimism and social connection. Together, these studies illustrate how DST enables individuals to organize disruption into coherent stories that foster identity continuity, build empathy, and enhance communication between patients and providers.

2.4 Integrating the Framework: Why All Three Theories Matter

While each of the three theoretical perspectives illuminates a distinct facet of the digital storytelling (DST) process, none alone is sufficient to capture its full impact. Transformative Learning Theory offers insight into the internal shifts in perspective prompted by critical reflection (Mezirow, 2000; Kitchenham, 2008), while Narrative Identity Theory focuses on how individuals reconstruct meaning and coherence across time through autobiographical storytelling (McAdams, 2001; Polkinghorne, 1995). Meanwhile, Empowerment Theory addresses the behavioral and social dimensions of gaining voice, agency, and influence over one's circumstances (Zimmerman, 1995). DST uniquely synthesizes these elements.

As individuals script and structure their stories, they engage in critical reflection that may prompt a re-evaluation of deeply held assumptions, thus operationalizing the core mechanisms of transformative learning (Brailas, 2021; Mazzoli Smith et al., 2024). Simultaneously, organizing lived experience into coherent, often redemptive narratives aligns with narrative identity processes, especially in contexts of illness or trauma (Frank, 1995; Elias & Brown, 2022). The capacity to share these stories in public or semi-public forums enables participants to reclaim narrative control and influence how they are socially perceived, contributing to empowerment and identity reconstruction (Gubrium, 2009; Briant et al., 2016; Gucciardi et al., 2019).

Additionally, DST enables multi-layered outcomes: cognitive shifts, emotional healing, and social action, making it methodologically well-suited for health promotion and well-being

research (Chou et al., 2021; West et al., 2022). As West et al. (2022) argue in their systematic review, DST is both a data collection method and an intervention, capable of influencing both participants and audiences. It supports storytelling as an ethical, participatory, and liberating practice, especially when paired with community-based or decolonizing methodologies (Flicker et al., 2014; Gubrium, Hill, & Flicker, 2014).

Taken together, this multi-theoretical lens enables a comprehensive, context-sensitive analysis of DST. For example, scripting a digital story may initiate cognitive transformation (Mezirow, 1997), reconstruct narrative coherence (McAdams, 2001), and foster empowerment through action or advocacy (Zimmerman, 1995; Briant et al., 2016). Integrating these perspectives offers a more nuanced understanding of how DST supports well-being, particularly in marginalized or medically underserved populations (Kisa & Kisa, 2025; Lohr et al., 2022).

3. Methodology

This chapter details the qualitative methodology used to investigate how digital storytelling (DST) contributed to storyteller well-being. The study employed thematic analysis to examine nine (N=9) publicly available digital stories related to personal or health-related experiences. These stories, presented in video, audio, or text formats, were analyzed for recurring themes linked to empowerment, identity transformation, and emotional resilience. The theoretical frameworks of transformational learning, empowerment, and narrative identity guided the analysis. Each story was examined for evidence of critical reflection, identity shifts or behavior, articulation of personal agency, and expressions of emotional or cognitive growth.

3.1 Research Design

The research employed a qualitative descriptive design, utilizing thematic analysis as the primary analytic strategy to capture cross-case patterns of meaning-making across multiple digital stories. Thematic analysis is particularly well-suited for identifying, analyzing, and interpreting patterns of meaning (themes) within qualitative data (Braun & Clarke, 2006; Nowell et al., 2017). This method supports both inductive and deductive coding, allowing theoretical alignment with transformational learning and narrative identity frameworks while remaining open to emergent insights from the data.

A predominantly deductive approach, guided by existing theory, was used to ensure focused and consistent coding, particularly important when analyzing complex narrative data related to personal health journeys and identity shifts (Fereday & Muir-Cochrane, 2006).

3.2 Data Source and Sampling

The dataset consisted of nine (9) publicly accessible digital stories sourced from established repositories and online platforms featuring narratives about health, resilience, and transformation. The stories represented a mix of formats: some were part of structured digital storytelling programs (including initiatives documenting lived experiences during the COVID-19 pandemic). In contrast, others originated from interviews or were uploaded individually by

storytellers. Publicly shared digital stories may overrepresent individuals who are more digitally literate or comfortable with self-disclosure, limiting sample representativeness. Examples include StoryCorps, the COVID-19 American History Project, the Occupational Folklife Project from the American Folklife Center at the Library of Congress, the Indian Health Service from the Federal Health Program for American Indians and Alaska Natives, and Patient Voices, a health advocacy organization that showcases digital storytelling projects (Gubrium, 2009).

Stories were selected using purposive sampling, a method well-suited to qualitative research that emphasizes depth and contextual relevance (Palinkas et al., 2015). Searches were conducted between May and June 2025 using repository-specific search tools and manual browsing of archives. The researcher used combinations of keywords such as "digital story," "health," "recovery," "covid," "illness," "behavior," and "personal transformation" to identify reflective narratives that described change or meaning-making processes related to health and well-being.

The researcher reviewed an initial pool of 178 digital stories. Stories were excluded if they (a) lacked a first-person narrator, (b) were institutional or promotional in nature, (c) did not include reflection on personal experience, (d) did not relate to one or more search keywords, (e) featured only one gender, or (f) lacked multimedia elements such as images, video, or audio narration. To ensure alignment with the study's focus, the final nine stories met four key inclusion criteria: (1) a clearly articulated personal or health-related narrative; (2) a first-person or reflective perspective; (3) a multimedia format (e.g., video, audio, or visuals with text); and (4) public accessibility under an open license consistent with the study's exempt IRB status.

Across repositories, the stories ranged in length from approximately 3 to 62 minutes and varied in production format (self-produced vs. professionally facilitated). Together, these cases provided sufficient conceptual variation and saturation across health-related transformation narratives while remaining small enough for detailed qualitative analysis. Table 1 summarizes the key characteristics of the nine digital stories analyzed in this study, including source, topic, duration, and key multimedia elements of text, audio, and images.

The final sample (N=9) exhibited significant variation in length, from approximately 3 minutes to over 60 minutes. This heterogeneity was addressed by establishing the 'narrative segment' as the primary unit of analysis (see Section 3.3), rather than the story's total runtime. This approach ensured analytic equity, as segmentation was based on shifts in topic, emotion, or reflection. Interestingly, story length did not strongly correlate with the number of analytically relevant segments; most stories, regardless of their total runtime, yielded a similar number of segments (e.g., 8-10), allowing for a comparable and consistent cross-case analysis.

Table 1

Characteristics of the Digital Story Sample

Story ID (Pseudonym)	Source/Platform	Publicly Stated Topic	Length (min: sec)	Key Multimedia Elements
Story A	Patient Voices	Living with Chronic Pain	03:51	Video + music
Story B	Occupational Folklife Project, Library of Congress	Dealing with substance abuse, recovery, sexual identity, and professional development	62:2	Image, audio + transcript
Story C	StoryCorps	Mom's health and problems over the years	23:35	Image + audio
Story D	StoryCorps	Working as a COVID-19 investigator and perspective change	41:05	Image + audio
Story E	COVID-19 American History Project, Library of Congress	Dealing with several bouts of COVID-19, job loss, and activism	38:56	Images + audio + transcript
Story F	YouTube	Participant's weight loss journey with traditional values	03:13	Video + music
Story G	StoryCorps	My grandmother, a pharmacist, describes her personal understanding of American healthcare as shaped by her life experiences.	13:23	Audio only
Story H	StoryCorps	Dealing with family trauma, health crisis, and the relationship with food	12:50	Image + audio + transcript
Story I	StoryCorps	Health issues, pregnancy, and mental health	10:47	Image + audio + transcript

3.3 Unit of Analysis

Each complete digital story served as the primary unit of analysis. This decision is grounded in narrative research methods, which emphasize treating a story as a holistic, bounded system with an internal logic, plot, and resolution (Riessman, 2008). This holistic focus ensured that interpretation remained grounded in each storyteller's overall narrative trajectory, emotional tone, and meaning-making process rather than fragmentary content alone.

To enable within-story analysis, each story was divided into analytically meaningful segments, defined as narrative episodes marked by a shift in topic, emotion, or reflection. A segment was

defined as a narrative episode in which the storyteller expressed a new perspective, described a turning point, or transitioned between life phases or interpretive themes (e.g., from describing an event to reflecting on its meaning). Segmentation was guided by both narrative cues (changes in tense, tone, or theme) and theoretical relevance, particularly points where storytellers demonstrated reflection, perspective shifts, or expressions of agency aligned with the study's three theoretical frameworks. (Chase, 2005).

The first coder performed the initial segmentation using story transcripts and audio-visual timestamps. These divisions were then reviewed collaboratively with the second coder to establish shared boundaries and consistency across stories. Both coders used this finalized segmentation scheme for all subsequent coding to ensure reliability and comparability of analytic units. Segments ranged in length from approximately 30 seconds to 3 minutes of narration, depending on story structure and narrative density.

This layered approach, treating each story as both a complete narrative and a collection of theoretically relevant episodes, allowed for fine-grained analysis of transformation, reflection, and empowerment while preserving narrative coherence and contextual integrity (Chase, 2005).

During coding, the researcher tagged specific segments within each story. These segments, such as turning points, moments of reflection, or declarations of agency, were tagged for more granular analysis. This layered approach supports contextual integrity and focused interpretation (Chase, 2005). Segmentation varied slightly across stories; most had 9 segments, with 1 fewer and 1 more, yielding 79 segments overall.

3.4 Coding Framework

A hybrid coding approach was employed, combining primarily deductive analysis with limited inductive refinement to capture emergent insights (Fereday & Muir-Cochrane, 2006; Crabtree & Miller, 1999). The deductive structure was anchored in the study's three guiding theories, Transformative Learning Theory (Mezirow, 2000), Narrative Identity Theory (McAdams, 2001; Frank, 1995), and Empowerment Theory (Zimmerman, 1995), which together formed a 3 × 3 coding framework comprising nine subthemes (see Table 2 in Section 4).

An initial codebook was constructed from literature-based definitions and refined through iterative testing. Each theoretical construct was operationalized through specific indicators and examples to ensure conceptual clarity and coder alignment. The first coder piloted the preliminary codebook using one story to evaluate clarity and relevance, and subsequent discussions with the second coder led to refinement of definitions, inclusion and exclusion rules, and distinctions between overlapping categories. This process established shared interpretive boundaries before complete coding began, supporting analytic consistency and transparency.

Within this framework, Transformative Learning Theory guided the identification of Mezirow's (2000) key elements, disorienting dilemmas, critical reflection, and new perspectives. Each digital story was examined for narrative sequences that reflected this three-stage process. A segment was coded as a disorienting dilemma when the storyteller described a significant disruption to identity or worldview, such as illness, diagnosis, or loss, that challenged prior

assumptions. Critical reflection was marked when the storyteller explicitly questioned those assumptions, re-evaluated personal meaning, or engaged in moral or cognitive reconsideration. New perspective was coded when the storyteller articulated evidence of transformed understanding, renewed empathy, or redefined identity following that reflective process. This structure enabled the researcher to trace how meaning-making unfolded over time, revealing transformation not as a single event but as a sequence of insights and integrations.

Narrative Identity Theory informed the analysis of how individuals constructed coherence, processed adversity, and articulated renewed self-concepts through storytelling. Segments were coded for three narrative functions: weaving coherence (instances where storytellers connected disparate life events into a unified plot or lesson); site of healing (moments where narration itself appeared therapeutic, often involving emotional release, forgiveness, or reconciliation); and resilient future (statements oriented toward hope, purpose, or future agency). Coding decisions were supported by attention to narrative cues such as temporal shifts, tone, or explicit statements of learning. This lens highlighted storytelling as an act of self-continuity, revealing how participants re-authored identity through reflective narration.

Empowerment was applied to examine intrapersonal, interactional, and behavioral expressions of agency (Zimmerman, 1995). Segments were coded for voice and agency when storytellers expressed ownership of their experiences, for narrative control when they redefined dominant or clinical narratives by asserting their own interpretations, and for public action when they described efforts to influence others or advocate for community well-being. Coding emphasized agency as both internal and relational, capturing shifts from private meaning-making to outward engagement. This theoretical lens absorbed earlier categories such as "voice" and "agency," situating them within a continuum from internal awareness to collective empowerment. Together, these three frameworks provided a comprehensive structure for identifying how reflection, identity reconstruction, and agency coalesced through digital storytelling.

3.5 Data Analysis Procedure

Thematic analysis followed the six-phase approach outlined by Braun and Clarke (2006), with adaptations to accommodate both manual and digital tools. During the familiarization phase, the researcher engaged deeply with each through repeated viewings, active note-taking, and reflective memoing. Early analytic notes captured recurring imagery, emotional tone, and moments of narrative tension, which informed later theme development.

Initial coding was conducted using a structured coding guide derived from the study's theoretical framework - Transformative Learning, Narrative Identity, and Empowerment. All stories were transcribed verbatim when text transcripts were unavailable, and the researcher coded both verbal and paralinguistic cues (e.g., tone, pauses, emphasis) when they contributed to meaning-making. Coding was managed using NVivo software, which supported organization, retrieval, and comparison of coded segments across stories. The first coder applied the 3×3 coding framework across the entire dataset, while the second coder independently coded a 45% subset to assess consistency. Researchers resolved conflicting interpretations through discussion and documented their decisions in analytic memos that refined theoretical constructs.

Once initial codes were generated, they were clustered into higher thematic categories corresponding to the study's three guiding theoretical frameworks. Under Transformative

Learning Theory, thematic patterns reflected a sequence from disruption to reflection and transformation, captured in the subthemes *disorienting dilemma*, *critical reflection*, and *new perspective*. Within Narrative Identity Theory, themes centered on coherence, healing, and reconstruction are represented by weaving, a *site of healing*, and a *resilient future*. Within Empowerment Theory, the thematic categories of *voice and agency*, *narrative control*, and *public action* illustrated a progression from internal self-definition to outward engagement and collective advocacy.

Theme refinement was iterative and interpretive. Each theme was reviewed for internal coherence, distinctiveness, and alignment with theoretical constructs. The researcher revisited the full dataset multiple times to confirm that the coded extracts authentically represented the storytellers' perspectives. Cases that contradicted or complicated emerging interpretations were examined closely to enhance conceptual robustness. The final reporting integrated these themes into an interpretive narrative, drawing connections to the guiding theoretical frameworks and incorporating direct quotes to retain the storytellers' voices.

This write-up adhered to qualitative reporting guidelines such as those outlined by Tong, Sainsbury, and Craig (2007), ensuring methodological rigor, transparency, and depth of interpretation. The final write-up integrated these themes into an interpretive synthesis that retained the storytellers' voices while connecting individual experiences to broader processes of reflection, transformation, and empowerment.

3.6 Researcher Positionality

As a healthcare professional, certified health education specialist, and advocate for better quality-of-life outcomes, I approached this research with both insider knowledge and a potential bias toward the benefits of DST. My own experiences, as well as family and friends' experiences about navigating life-threatening and chronic illnesses, give me empathy for storytellers' experiences, but may also prompt me to see transformation where participants may not. Through reflexive journaling and regular consultation with my professor and advisor, I will continually examine how my enthusiasm for DST might influence my interpretation of storyteller narratives.

3.7 Trustworthiness and Rigor

Trustworthiness and rigor in this study were established using Lincoln and Guba's (1985) criteria for qualitative research. Credibility was enhanced through reflexive journaling and prolonged engagement with the material, allowing the researcher to develop a deep familiarity with each narrative. To further enhance credibility, peer checks and feedback from academic mentors were incorporated throughout the analysis. Transferability was addressed through the use of thick description, which captured the contextual richness of each story and the nuance of the thematic findings, consistent with Geertz's (1973) approach. Dependability was maintained by documenting the research process in detail, including a clear audit trail of coding decisions and development of the codebook. Confirmability was ensured through transparent reporting, a commitment to reflexivity, and the consistent application of theoretical constructs across the dataset. Reflexivity played a central role throughout, as the researcher continuously examined

her interpretive lens and acknowledged potential biases during analysis (Finlay, 2002; Ravitch & Carl, 2016)

3.8 Ethical Considerations

Although the study received exempt IRB status due to the use of publicly available, archival data, ethical care was exercised throughout the research process. The anonymity of storytellers was respected unless individuals had clearly and willingly identified themselves in their published work. Stories that appeared to be under restricted access or not explicitly designated for public use were excluded from the dataset. Additionally, credit or attribution was provided where appropriate; however, excerpts were paraphrased or anonymized when ethical ambiguity existed. These practices are consistent with established ethical guidelines for working with online narratives in qualitative health research (Markham & Buchanan, 2012).

3.9 Research Reliability

A second reviewer, who reported no conflicts or potential biases, independently coded four segments from each of the nine story transcripts (36 segments total; 36/79 = 45.5%) using the consolidated 3x3 theoretical framework. Inter-rater reliability for the double-coded subthemes was calculated as percent agreement. The primary researcher applied the 3x3 framework to all 79 segments in the primary analysis; however, full double-coding of each segment was not feasible due to the framework's granularity and the mixed data formats.

4. Results

4.1 Overview of Theoretical Evidence Across Stories

Across the nine digital stories, processes of reflection and narrative reconstruction were consistently evident, especially in relation to narrative identity. Many storytellers engaged deeply with their past experiences, constructing coherent narratives that helped make sense of disruption, illness, or personal growth. Transformative learning outcomes, such as perspective shifts and emotional insight, were also common, though they varied in depth. Empowerment outcomes were the most context-dependent, with stronger expressions of agency found in stories emerging from structured programs or community contexts.

Quantitative summaries of coded evidence (Table 4) reflect these patterns. Narrative Identity Theory (NT) demonstrated the strongest and most consistent evidence, with seven stories showing very strong support (82–100%) and two showing strong support (55–81%). Transformative Learning Theory (TLT) showed strong support in eight stories, with one achieving very strong support. Empowerment Theory (ET) exhibited the most variation, ranging from moderate to very strong support across stories.

4.2 Story Contexts and Transformational Arcs

The nine digital stories captured a wide range of transformative experiences, illustrating how individuals navigate crises, reflect, and construct meaning through personal narrative.

Story 1 centers on a middle-aged mother living with Crohn's disease since childhood. Recounting medical trauma, surgical interventions, and dependency on pain medication, she reflects on the long-term impact of being judged in healthcare settings. Her story exemplifies transformation through narrative control and reclaiming dignity after sustained medical marginalization. When asked to quantify her suffering, on a standard pain scale, she responded: "When nurses ask me, what is your pain score [patient]? I would always answer 743. Because my ten is not usually the same as theirs. I have had very severe Crohn's disease since I was a child. So I don't really know anything else. I know pain. We know each other very well." This creative numerical protest reveals expert knowledge no medical chart could capture. Her story exemplifies transformation through narrative control and reclaiming dignity after sustained medical marginalization.

Story 2 follows a 30-year-old homosexual man from the South, who battled addiction, homelessness, and legal issues after leaving college. Through recovery and reconnection with his father, he finds purpose in helping others. His story illustrates identity reconstruction and empowerment through lived experience and familial healing. Moreover, at his lowest point, he described the unexpected turning point: "I called them with no intention to go... they were going to be doing a trial on this new form of treatment… neuroelectric therapy... I did not even think it was going to work... but it worked... my cravings went down...The simplicity of 'but it worked ' exemplifies a shift in perspective. After years of failure, captures finding hope when he had abandoned it. His story illustrates identity reconstruction and empowerment through lived experience and familial healing.

Story 3 features a mother with multiple chronic conditions in dialogue with her daughter: their intergenerational exchange surfaces shame, stigma, and the emotional toll of disability on family life. The story models narrative healing through shared reflection and meaning-making within the family unit. Despite navigating vision loss, dyslexia, and autoimmune disease, she refused to be constrained: "the vision is hard because I can't drive, but I don't let it stop me from doing anything else... I never have let my vision stop me from doing anything, pretty much... like my horses, bike riding, I'm all about adventure." Her defiant self-definition, "I'm all about adventure," maintains identity beyond disability categories. The story models narrative healing through shared reflection and meaning-making within the family unit.

Story 4 presents a first-generation Mexican American public health worker processing grief and isolation during the COVID-19 pandemic. She reflects on boundary-setting and mental health struggles. " I would have... anywhere between five to eight conversations a day. I would

interview people who had tested positive for COVID. It would range from 10-minute to 2-hour conversations. The woman was just kind of like. "I haven't talked to anyone all week. I've been so lonely. I kind of absorbed the emotions of these people. I was helping them because they were getting it off their chest." Her story highlights transformative learning through emotional labor and the formation of professional identity during a crisis.

Story 5 tells the experience of a Black woman, comedian, and community organizer facing unemployment and repeated COVID infections. She narrates the destabilization of her life and mental health. I had folks who were unable to get unemployment... single moms... they stayed with me... we were like filling their houses... we banded together... we depended a lot on those services. It's kind of in my spirit... I've been organizing for 20 years... I don't want to take more from the city than I'm giving... I'm trying to figure out, as an organizer and a hospitality worker, what my role is here?" Her story demonstrates resilience and social critique through humor and community connection.

Story 6 centers on a Native American woman inspired by her grandmother's diabetes to pursue health change while balancing caregiving and cultural identity. Participation in a tribal health program prompted reflection on ancestral knowledge and personal habits. "With exercise, I could feel oxygen circulating all over my body, giving me a euphoric feeling as if I were a superhero. I discovered a renewed self-worth in eight months. I lost 70 pounds." "I use my paddle to remind me in my journey as I move forward that I am proud to be Sklamliving to honor the true name and meaning of my tribe, the strong and clever ones." Her story exemplifies empowerment through cultural reconnection.

Story 7 follows a pharmacist and granddaughter who shift from passive awareness to social justice advocacy in healthcare. Triggered by memories of segregation and reinforced by COVID-era disparities, she reflects on systemic injustice. "I was always given this understanding from the time I was very little that you deserved whatever you got, so that people who say lived in poverty or didn't have good health care, it was because of something that they did that warranted the way that they were treated." "I had always wanted to join the Peace Corps... after I got that particular job there, I felt committed that I could do my Peace Corps, working with underserved patients in the United States." "What kind of health provider do I want to be?... I can be respectful to them... if the patient's sitting, I'm sitting next to them. If the patient's standing, I'm standing next to them... to make sure that I wasn't looking down on people... meet people where they are."Her story illustrates a moral transformation rooted in historical consciousness and professional commitment.

Story 8 is a joint reflection by a Colombian father and his U.S.-born daughter navigating chronic health issues across cultural lines. Their dialogue reveals tensions between traditional values and medical adaptation. "The taste of the food is very plain compared to Colombia. This is why most of the people here add dressings and sauces to their food. The processed food doesn't really appeal to me, so I might learn to cook more naturally and use organic produce whenever I can.

Most of the health problems here in the United States are a result of the influence of the overly processed food that people eat consistently." During my 20s, I had health issues due to my eating unhealthy because I didn't have time to cook. I had to go into surgery, and they removed my gallbladder. That day, my life changed forever. After a surgery, I decided to eat better and prepare my meals as nutritionally and healthily as possible." The story embodies narrative identity shaped by bicultural negotiation and family resilience.

Story 9 involves a young mother coping with recurring health crises and pregnancy complications. And I try to be grateful, actually, it's one of the biggest keys that helps me, like, okay, what do I still have? Like, I have people who care about me. I have people who will help me. I'm not alone in this, and I can still live. Like, I can still do things and just take it day by day. "I have to realize that I'm not helpless, even if I may feel like it... this is only temporary. There'll be a solution, and I can still live... I try to be grateful... what do I still have? Like, I have people who care about me... I'm not alone in this, and I can still live... take it day by day. "The strategies I use are to understand what the problem was that caused the health issues in the first place. But like I said, it's really just prevention that I try to focus on. So that way, it doesn't get to that point, or if it does, it won't be as bad as it was. And so those are some of the things that I do." Her reflection centers on developing emotional coping tools and a prevention mindset. Her story reflects personal growth through self-care, maternal responsibility, and identity redefinition.

4.3 Thematic Findings Across Theoretical Frameworks

Using the 3×3 coding framework, each story was analyzed for nine subthemes spanning reflection, coherence, and empowerment (Table 2). A total of 79 segments were coded across the nine stories. Coding strength was indicated using "yes" (strong evidence), "~" (emerging evidence), and blank (no evidence). To ensure consistency, a second researcher independently coded the data, and inter-rater reliability was used to assess agreement.

The analysis of the nine stories revealed consistent patterns organized around the three core theoretical frameworks. While Narrative Identity was a universal element in all stories, Transformative Learning and Empowerment were more variable, as illustrated by the following themes.

Table 2

3x3 Theoretical Framework

| Transformative Learning Theory (TLT)	Disorienting Dilemma	Critical Reflection	New Perspective
	A moment in the story where something big or unexpected disrupts the person's usual way of thinking or living, like a diagnosis, a significant loss, or a crisis.	Deep examination of personal values, biases, and assumptions through self-reflection and meaningful dialogue. Includes questioning 'why did I believe that?' and examining what shaped thinking patterns.	The emergence and application of transformed thinking, including new ways of understanding others, implementing change, developing empathy, ethical reasoning, and negotiating new roles and relationships over time.
Narrative Identity Theory (NT)	**Weaving Coherence**	**Site of Healing**	**Resilient Future**
	Creating logical, coherent narratives that construct identity and make sense of life events over time. How the storyteller organizes their experiences into a meaningful sequence.	Rewriting or retelling one's story in a new way is often a healing or clarifying process for making sense of the past, processing trauma, and expressing previously unspoken experiences.	Who is telling the story, how, and why? Developing an empowered narrative voice from positions of power, vulnerability, or hindsight that can navigate complexity and respond to feedback from others.
Empowerment Theory (ET)	**Voice/Agency**	**Narrative Control**	**Public Action**
	Finding voice. The storyteller is actively owning their story and choices. The person sees themselves as someone who acts with confidence and self-worth.	Beliefs in one's ability to succeed and in skill development align with taking control of one's future through purposeful planning and skill building.	Moving from personal empowerment to directly influencing others aligns with community engagement and systemic change.

Across the dataset, NT showed the most consistent and robust representation, with high frequencies of reflective storytelling and coherent meaning-making across nearly all stories. TLT was also strongly represented, particularly in stories involving critical reflection, identity shifts, and meaning reconstruction. ET, by contrast, showed greater variability; strong evidence of empowerment was present in stories rooted in community engagement or structured health programs, while others reflected more internal or emerging forms of agency. These patterns

suggest that while all three frameworks are relevant, narrative identity and transformative reflection are the most consistently articulated processes within these publicly shared health stories.

To examine patterns of theoretical alignment at the story level, percentage scores were calculated as descriptive indicators of how strongly TLT, NT, and ET were reflected in each narrative. Table 4 summarizes the relative strength of each framework across all nine stories.

Figure 1

Summary of Theoretical Analysis Across Stories
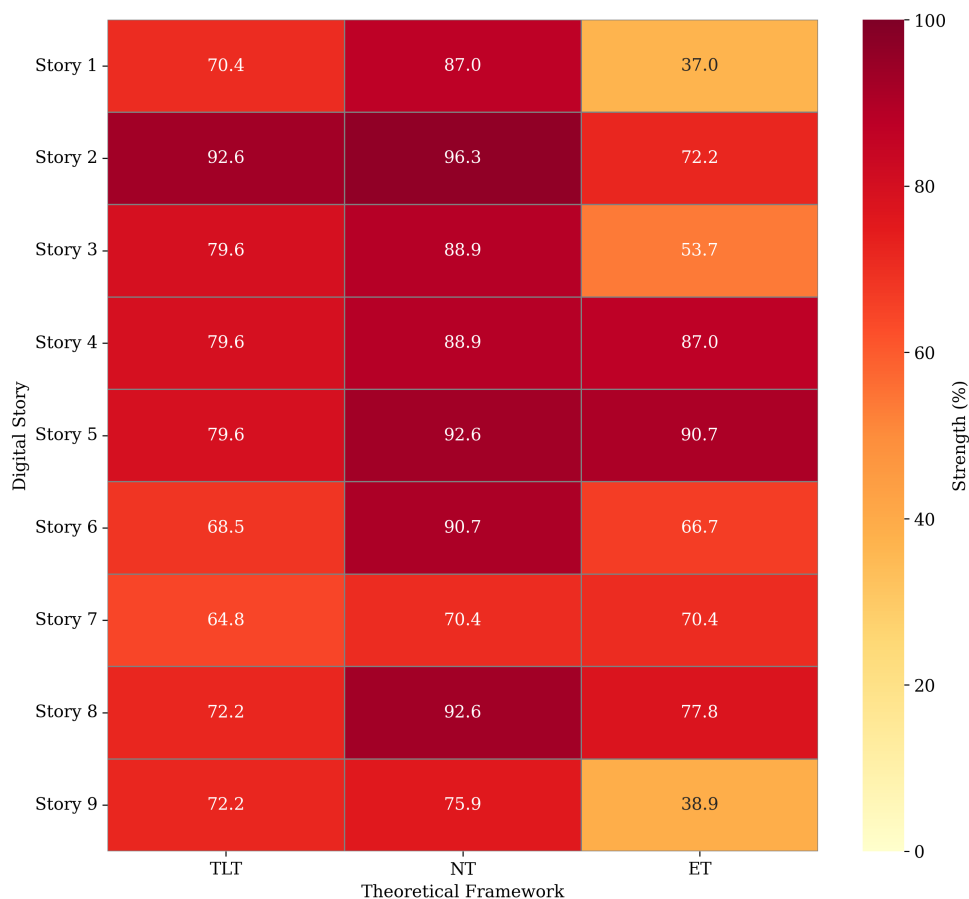
Note. Strength Categories: 82-100% - Very Strong, 55-81% Strong, 28-54% Moderate, 0-27% Minimal/Emerging

NT showed the strongest and most consistent support across the stories, likely because storytelling naturally invites reflection, identity construction, and meaning-making. As a narrative form, DST encourages individuals to shape coherent life stories, especially in response to disruption, which aligns closely with NT. Story 3 illustrates this through a mother–daughter dialogue that surfaces stigma and facilitates intergenerational identity reconstruction. TLT was most evident in stories involving disorienting dilemmas followed by critical self-reflection and

redefinition, as seen in Story 2's journey from addiction to recovery. ET outcomes were more variable, emerging most strongly when storytellers connected personal healing to collective purpose. For example, Story 5 moves from health decline and unemployment to renewed agency through community organizing and advocacy. These patterns suggest DST most reliably supports reflective and narrative processes, while empowerment outcomes depend more on context and intent (Figure 1).

4.3.1 Narrative Identity: Weaving Coherence and Healing

The most dominant theme was the use of storytelling to build a coherent life narrative (McAdams, 2001). Storytellers consistently engaged in "weaving coherence," connecting disparate events to make sense of their journey. "My recovery coach asked me about the peer support class. I had never heard of it when I was going through the class; that is when it clicked for me that I needed to work in substance abuse, all came full circle..." As shown in this example from Story 2, the narrative act itself becomes a "site of healing" (Frank, 1995). The storyteller is not just reporting events; they are actively reframing their past, turning a story of shame into a redemptive one. This was also evident in Story 8, where the father and daughter reframed their narrative, creating a deeper shift in perspective to meaning-making. "I learned to cook at the age of 14 due to my family issues. My mom had passed away, and I had to assume a role of father and mother for my siblings... At the beginning, it wasn't easy, but with time, I learned to like cooking traditional foods." These acts of narrative reframing often catalyzed deeper shifts in perspective to meaning-making.

4.3.2 Transformative Learning: Reflecting on Disorienting Dilemmas

Evidence for Transformative Learning (Mezirow, 2000) was most potent when storytellers described their "disorienting dilemma" and the "critical reflection" that followed. "I was one of the COVID layoffs. But you could say that that was one of the positive things that came out of it for me, I applied to the county to become a COVID investigator." In Story 5, what initially appeared as a crisis was reframed as an opportunity with critical reflection on the storytelling, recognizing an opportunity from adversity. Similarly, the pharmacist in Story 7 traced her evolving consciousness across decades, articulating a fundamental shift in worldview: "I was raised to be very responsible. You deserved whatever you got. Over time, I have come to realize that, while there are certainly things we do, I have grown to expand that to try to understand why those sorts of things happen. There are other factors than just what the individual wants or does that impact just about everything in life."

4.3.3 Empowerment: Finding Voice and Agency

Finally, Empowerment (Zimmerman, 1995) manifested as storytellers moved from being passive subjects of their experience to active agents. The Crohn's patient in Story 1 described reclaiming her dignity through creative self-assertion. This declaration from Story 1 illustrates a profound shift in "narrative control." The storyteller reclaims her dignity from a medical system that had

marginalized her. "Katie made me a lovely chart to hang by my bed. Reminding me that the feelings would pass and I was safe. She made another to hang on my curtains, explaining that if I could just have 20 minutes to myself, I would feel so much better. She even put a little ballerina in the corner. I used to dance to remind me and the nurses and doctors of the person I really am. It's easy to lose yourself in the hospital." Likewise, the community organizer in Story 4 articulated a philosophy of interconnected agency. "It's kind of in my spirit... I've been organizing for 20 years... I don't want to take more from the city than I'm giving... I'm trying to figure out, as an organizer and a hospitality worker, what my role is here?" For some, like the storyteller in Story 4, this internal agency translated into "public action," where her personal story became a tool for recognizing personal and collective power. Table 6 provides an overview of evidence strength for each stage across all nine stories, revealing patterns in how storytellers navigated the transformative process.

Table 6

Four-Stage Model: Evidence Strength Across Stories
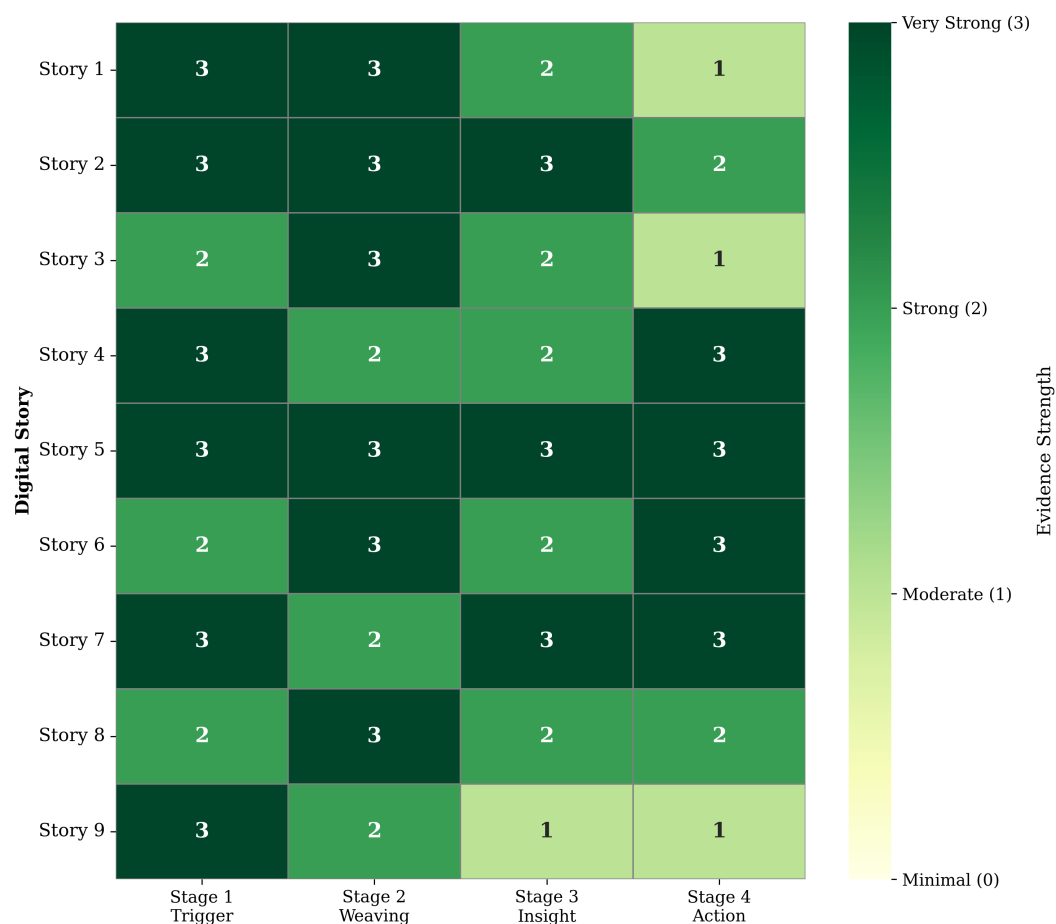
Note. Strength Categories*: 82-100% -Very Strong, 55-81% - Strong, 28-54% - Moderate, 0-27% - Minimal/Emerging*

4.3.4 Methodological Considerations: Inter-Rater Reliability

Ensuring coding consistency, a second researcher independently coded all segments. Inter-rater reliability analysis revealed distinct patterns: NT showed high agreement (87.1%), TLT showed moderate agreement (43.7%), and ET showed moderate agreement (63.4%). These differences reflect fundamental distinctions in what each theory measures. The high agreement for NT makes sense. Narrative elements-coherence, voice, and story structure are observable in the digital asset. Two coders examining the same story can readily identify these manifest features in the text, audio, and visual structure.   The lower agreement for TLT illuminates the 'invisible' nature of perspective transformation. Critical reflection occurs within the storyteller's consciousness and is not always explicitly articulated (Mezirow, 2000; Taylor, 2007). What signals 'critical reflection' to one coder may appear as a simple description to another. This variability is not a methodological weakness but an epistemological reality: internal transformation is inherently more complex to observe than external narrative construction.

ET's moderate agreement (63.6%) reflects the dual nature of empowerment constructs. Observable markers like voice and narrative control are relatively straightforward to identify. In contrast, transformative learning and assessing empowerment require supplementary evidence beyond the story asset, such as follow-up interviews or reflective journals. For researchers, these findings indicate that multi-method approaches strengthen claims about transformation and empowerment outcomes. For practitioners, the digital story provides strong evidence of narrative development, but assessing deeper learning may require additional reflection activities.

4.4 Cross-Theoretical Integration

The three theoretical frameworks did not operate independently. Instead, they functioned as interconnected dimensions of a broader transformative process. Analysis revealed a synergistic 4-stage model pattern: storytellers experienced disorienting dilemmas (Stage 1 - TLT) that prompted narrative construction (Stage 2 - NT), which facilitated critical reflection and perspective transformation (Stage 3 - TLT), leading to empowered action and public voice (Stage 4 - ET). This synergistic model, including the identification of a "Resilience Loop" which empowered action feeds back to strengthen narrative identity, is explored in detail in the Discussion section.

4.5 Summary of Findings and Theoretical Implications

While narrative identity processes (NT) appeared consistently across all stories, evident through reflective narration, coherence, and voice restoration, transformative learning (TLT) and empowerment (ET) outcomes emerged more selectively. TLT was most visible in stories involving clear disruptions followed by perspective shifts, while ET outcomes were strongest when storytellers linked personal healing to broader social contribution. The combined use of NT, TLT, and ET offered a multidimensional understanding of how digital storytelling encourages reflection, identity reconstruction, and action. Analysis also revealed a synergistic 4-

stage transformative process, from disorienting dilemma through narrative weaving and critical insight to empowered action, with a feedback mechanism (Resilience Loop) in which public empowerment strengthens narrative identity. These findings suggest that DST functions as a connective process, linking internal reflection to external agency, and that its transformative potential depends on both narrative content and storytelling context. The theoretical and practical implications of this synergistic model are discussed in Section 5.

5. Discussion

These findings have important theoretical, practical, and methodological implications for digital storytelling research and practice. The following sections explore how the integrated framework advances DST theory (5.1), guides program design (5.2-5.3), acknowledges study limitations (5.4), and suggests directions for future research.

5.1 Theoretical Implications

This study makes four key contributions to digital storytelling theory. First, it provides empirical support for positioning narrative identity as the foundational process in DST transformation, challenging prior work that treated reflection, identity, and empowerment as parallel dimensions (Lambert, 2013; Gubrium et al., 2014). The sequential model developed, where narrative coherence-building enables transformative reflection, which in turn facilitates empowerment, offers a more nuanced understanding of DST's mechanisms.

Second, the differential inter-rater reliability across frameworks (NT: 87.1%, ET: 63.6%, TLT: 43.7%) reveals important methodological insights. While narrative structure elements are readily observable in story content, internal cognitive transformations proved more challenging to assess reliably, suggesting that single-method approaches may inadequately capture the whole arc of transformative learning. Future DST research would benefit from mixed-methods designs combining content analysis with participant interviews or longitudinal follow-up to understand better how internal shifts manifest over time (Mezirow, 2000; Kitchenham, 2008).

Third, this study demonstrates that empowerment outcomes are highly context-dependent, influenced by factors such as program structure, community connections, and storytelling purpose. This finding has important implications for DST practice: facilitators seeking empowerment outcomes should attend not only to storytelling techniques but also to creating conditions such as audience engagement, peer support, and opportunities for action that enable agency development to take root (Zimmerman, 1995; Brailas, 2021).

Fourth, this study identifies a synergistic 4-stage transformative process (detailed in Section 5.2) in which disorienting dilemmas prompt narrative construction, which facilitates critical reflection, leading to empowered action. The model positions narrative weaving (Stage 2) as a functional bridge that enables transformation and identifies a "Resilience Loop" in which public action (Stage 4) feeds back to strengthen narrative identity (Stage 2). This recursive mechanism,

enabled by digital affordances such as nonlinear editing and digital permanence, distinguishes digital storytelling from traditional narrative approaches and provides theoretical explanation for DST. This study makes four key contributions to digital storytelling theory. First, it provides empirical support for positioning narrative identity as the foundational process in DST transformation, challenging prior work that treated reflection, identity, and empowerment as separate but related dimensions (Lambert, 2013; Gubrium et al., 2014). The sequential model developed, in which narrative coherence-building enables transformative reflection, which then facilitates empowerment, offers a more detailed understanding of DST's mechanisms.

Second, the variable inter-rater reliability across frameworks (NT: 87.1%, ET: 63.6%, TLT: 43.7%) reveals important methodological insights. While narrative structure elements are easy to observe in story content, internal cognitive transformations are more difficult to assess reliably, suggesting that relying on a single method may fail to capture the full scope of transformative learning. Future DST research would benefit from mixed-methods approaches combining content analysis with participant interviews or longitudinal follow-up to understand better how internal changes develop over time (Mezirow, 2000; Kitchenham, 2008).

Third, this study shows that empowerment outcomes are highly context-dependent, influenced by factors such as program structure, community connections, and the purpose of storytelling. This finding has meaningful implications for DST practice: facilitators aiming for empowerment should focus not only on storytelling techniques but also on creating conditions such as audience engagement, peer support, and opportunities for action that help develop agency (Zimmerman, 1995; Brailas, 2021).

Fourth, this study identifies a synergistic four- stage transformative process (detailed in Section 5.2. 2) where disorienting dilemmas lead to narrative construction, which promotes critical reflection, ultimately resulting in empowered action. The model positions narrative weaving (Stage 2) as a key link that enables transformation and identifies a "Resilience Loop" in which public action (Stage 4) feeds back to strengthen narrative identity (Stage 2). This recursive mechanism, made possible by digital tools such as nonlinear editing and digital permanence, sets digital storytelling apart from traditional narrative methods and explains its transformative potential.

5.2 The Synergistic 4-Stage Model: A Framework for Digital Storytelling Transformation

This study's primary theoretical contribution is the identification of a synergistic 4-stage transformation process in digital storytelling. Analysis revealed that TLT, NT, and ET do not operate as parallel frameworks but rather as interconnected dimensions within a sequential yet recurrent model (see Figure 2). The model positions narrative construction (Stage 2) as the functional bridge enabling transformation and identifies a "resilience Loop" in which empowered action (Stage 4) feeds back to strengthen narrative identity.

Figure 2

The Synergistic Process of Digital Storytelling
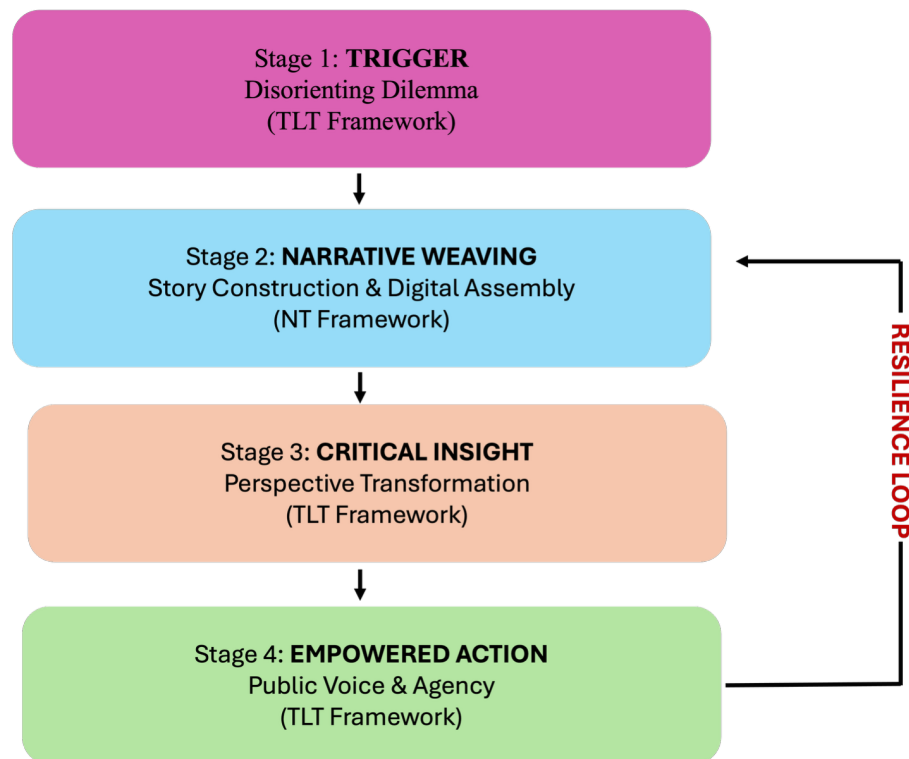
Note. The Resilience Loop shows how empowered action (Stage 4) feeds back into narrative weaving (Stage 2). Public advocacy transforms storytellers from victims to leaders, reweaving their identity with greater coherence and reducing the likelihood of regression.

5.2.1 Stage 1: Disorienting Dilemma (The Trigger)

Transformation begins when storytellers experience disruption, health crises, trauma, or identity conflicts that destabilize existing meaning-making frameworks. These disorienting dilemmas (Mezirow, 2000) create the need for sense-making but do not directly produce transformation. Story 1's chronic Crohn's disease and surgical interventions, Story 2's homelessness and addiction, and Story 4's pandemic-induced isolation exemplify such triggering events. The trigger alone is insufficient; without narrative processing (Stage 2), the disruption remains unresolved as a crisis rather than a transformative opportunity.

5.2.2 Stage 2: Narrative Weaving (The Functional Bridge)

Stage 2 serves as the critical mediator between disruption and insight. Through digital storytelling, individuals select, sequence, and layer their experiences into coherent narratives. This process itself facilitates new understanding; narrative construction is not simply reporting transformation, but is the mechanism that produces transformation.

Story 2 demonstrates this functional bridge. The narrator's phrase "it all came full circle" reveals how he organized distinct experiences, homelessness, recovery, and coursework into rational meaning. The act of constructing this narrative enabled him to recognize his calling in substance abuse work. Without narrative weaving, the experiences were fragmented; digital assembly gave structure and purpose.

Story 8's bicultural narrative illustrates the digital affordances enabling Stage 2. The father compares Colombian food traditions against American health crises, using historical arrangement to create a narrative that neither he nor his daughter could articulate without the digital assembly process. Nonlinear video editing allows storytellers to deconstruct and reconstruct trauma in new temporal and causal orders, a feature unavailable in oral storytelling. As the daughter describes: "I learned to cook at the age of 14 years due to my family issues... At the beginning, it wasn't easy, but with time, I learned to like cooking traditional foods." This retrospective organization, enabled by digital editing, opens new avenues for meaning-making about cultural identity and health adaptation.

The narrative weaving at Stage 2 enables the progression from disruption (Stage 1) to insight (Stage 3). Without this mediating process, the disorienting dilemma cannot be transformed into learning.

5.2.3 Stage 3: Critical Insight (Perspective Transformation)

Narrative construction prompts critical reflection and shifts in perspective. Story 7's pharmacist traces her evolving consciousness across decades, articulating a fundamental worldview transformation: "I was raised to be very responsible. You deserved whatever you got. Over time, have come to realize that, while certainly there are things we do... I've grown to expand that to try to understand why those sorts of things happen." The digital medium enabled what we term "aesthetic distance";

by watching herself on screen, reinforced by COVID-era disparities, she became an observer of her own life. This doubled perspective, simultaneously inhabiting and observing one's experience, mechanically triggers Mezirow's critical reflection.

Story 5 demonstrates how Stage 2 enables Stage 3. The community organizer's narrative reframing of unemployment," one of the positive things that came out of it", repositioned her from victim to investigator. This narrative act enabled critical reflection on her role: "I've been organizing for 20 years... I don't want to take more from the city than I'm giving... what is my role here?" The storytelling process transformed crisis into opportunity through reflective sense-making.

5.2.4 Stage 4: Empowered Action (Public Voice and Agency)

Transformed perspectives lead to empowered agency. Story 5 moved from personal unemployment to community advocacy, supporting single mothers and coordinating mutual aid.

Story 6's cultural reconnection led to communal health role-modeling, using her paddle to symbolize tribal identity: "I use my paddle to remind me in my journey as I move forward that I am proud to be S'Klallam.. to honor the true name and meaning of my tribe, the strong and clever ones." Story 7 translated evolved consciousness into changed professional practice: "if the patient's sitting, I'm sitting next to them... to make sure that I was not looking down on people."

However, not all stories progressed to Stage 4. Story 1 exemplifies transformation constrained at Stage 3. Her narrative weaving is sophisticated, the creative protest of "743" on the pain scale, the charts with ballerinas, to remind me and the nurses and doctors of the person I really am." These narrative acts demonstrate critical insight into medical marginalization. Nevertheless, empowerment remains largely internal, characterized by narrative control without public action. Unlike Stories 5, 6, and 7, which progressed to community organizing, cultural role-modeling, and changed professional practice, Story 1's agency focuses on personal dignity within healthcare encounters rather than systemic advocacy. This pattern suggests that while digital storytelling reliably enables Stages 1-3, progression to Stage 4 depends on contextual factors beyond the story itself, program structure, community connection, and opportunities for action.

5.2.5 The Resilience Loop: Stage 4 Returns to Stage 2

Critically, the model is not linear. When storytellers take public action, sharing stories at city council meetings, becoming peer support specialists, or modeling health change in their communities, they reweave their narrative identity with greater strength, returning to Stage 2 with enhanced coherence. This "Resilience Loop" creates a feedback mechanism that sustains transformation.

Story 6 illustrates this recursive quality. Cultural reconnection and participation in a tribal health program (Stage 4) prompted reflection on ancestral knowledge (Stage 3), which strengthened her identity as both a caregiver and a cultural role model (Stage 2). Story 2's narrator describes this loop: once he became a peer support specialist, his professional identity reinforced his recovery narrative. The public act of helping others "fixed" his new identity, making regression to his old self-concept less likely.

The digital medium enables this loop through what we term "digital permanence." Digital stories create permanent, shareable artifacts that fix new identities in public space. Unlike ephemeral conversations, the digital story exists as an enduring record of the transformed self. Story 5's community organizer noted that once her story was shared publicly, "I could not go back" to being defined solely by unemployment and illness. The permanence of the digital artifact creates accountability to the new narrative, strengthening the resilience loop.

This feedback mechanism, where empowerment reinforces narrative strength, distinguishes digital storytelling from one-time reflective exercises. The transformation becomes iterative rather than episodic, with each cycle through the loop deepening the change.

5.2.6 Digital Affordances Enabling the Synergistic Process

Three specific digital features facilitate this synergistic model, explaining why digital storytelling may produce different outcomes than oral or written narrative work:

First, nonlinear video editing enables Stage 2. Storytellers can "cut and paste" trauma into new temporal orders. Story 1's creative visual layering of the pain scale protest with medical imagery allowed her to show inadequacy rather than merely describe it. This capacity for reorganization and juxtaposition is unique to the digital medium.

Second, self-viewing creates aesthetic distance, enabling Stage 3. By watching themselves on screen, storytellers become observers of their own lives. This external perspective triggers critical reflection that may not emerge through writing or speaking alone. The visual and auditory playback creates what phenomenologists might call a "split consciousness": I am both the person in the story and the person watching it, enabling new insights.

Third, digital permanence enables Stage 4 and the Resilience Loop. The shareable, durable nature of digital stories creates public commitments to new identities. Unlike journal entries or private conversations, digital stories can be viewed repeatedly, shared widely, and archived permanently. This durability strengthens transformation by making the new narrative publicly accountable and socially reinforced.

These digital affordances help explain the IRR patterns identified in Section 4.3.4. Stage 2 (narrative weaving) showed high inter-rater agreement because it involves observable digital construction, visible editing choices, sequence decisions, and compositional elements. Stage 3 (critical insight), however, showed low IRR because it remains internal and inferential. The digital artifact provides insight but cannot fully capture it, requiring supplementary evidence to confirm the internal transformation.

5.2.7 Theoretical Positioning: Extending DST Theory

This synergistic model extends prior digital storytelling theory in three ways. First, it challenges work that treats reflection, identity, and empowerment as parallel dimensions (Lambert, 2013; Gubrium et al., 2014), demonstrating that narrative construction serves as the functional bridge enabling progression from disruption to transformation to action. Second, it identifies the Resilience Loop as a mechanism that distinguishes digital from non-digital narrative work, offering a theoretical explanation for why DST may produce more durable outcomes than traditional journaling or oral storytelling. Third, it positions Stage 2 variability as explaining differential outcomes, not all storytellers progress beyond narrative construction, and this variation is theoretically meaningful rather than methodologically problematic.

The model aligns with Frank's (1995) narrative medicine framework, positioning storytelling as foundational to sense-making in illness experiences, but extends that work by specifying the mechanisms through which narrative construction enables transformation. It also confirms

Zimmerman's (1995) observation that empowerment requires the alignment of individual, social, and situational factors, which explains why Stage 4 outcomes were more context-dependent than those in earlier stages.

5.3 Theoretical Integration

This study's integrated framework contributes to DST theory by positioning narrative identity as the foundational mechanism through which digital storytelling operates, challenging prior work that treated reflection, identity, and empowerment as parallel rather than sequential processes (Lambert, 2013; Gubrium et al., 2014). By demonstrating that narrative coherence-building precedes and enables transformative learning and empowerment, this research offers a more nuanced model of DST's transformative mechanisms.

The finding that meaningful narratives may be a prerequisite for extensive cognitive restructuring (Mezirow, 2000) aligns with Frank's (1995) narrative medicine framework, which positions storytelling as foundational to sense-making in illness experiences. However, this study extends that work by showing how narrative construction specifically enables the progression from reflection to agency. This has implications for how we understand DST's role in health contexts: not merely as a reflective tool, but as a developmental process that can, under appropriate conditions, facilitate empowerment.

The variability in empowerment outcomes confirms prior research suggesting that agency development requires alignment of individual, social, and situational factors (Zimmerman, 1995; Brailas, 2021). This finding underscores that digital storytelling alone may be necessary but not sufficient for empowerment; contextual supports matter significantly.

5.4 Practical Implications

These findings have practical implications for digital storytelling programs across educational, healthcare, and community contexts.

For educators, these findings suggest focusing assessment on participants' ability to construct meaningful narratives rather than expecting dramatic transformations (Lambert, 2013). The high inter-rater reliability of narrative indicators suggests that success can be confidently measured through story coherence, reflective depth, and evidence of meaning-making (Riessman, 2008; Braun & Clarke, 2006; Frank, 1995). However, the variability in transformative outcomes suggests that educators should allow flexible timeframes and avoid rigid expectations of cognitive change, acknowledging that more profound shifts may unfold over time (Mezirow, 2000).

For program designers, these findings suggest structuring DST initiatives with narrative construction and reflection as primary objectives (Robin, 2008). Programs should allocate sufficient time for participants to craft meaningful stories before anticipating transformative or

empowerment outcomes. Given the context-dependent nature of empowerment, program design should maintain flexibility in expected outcomes rather than imposing rigid transformation expectations, recognizing that participant characteristics and circumstances significantly influence the depth and type of learning that emerges (Zimmerman, 1995; Elias & Brown, 2022).

For practitioners, these findings suggest positioning digital storytelling primarily as a reflective tool that supports narrative construction and meaning-making rather than as a promise of transformative or empowering outcomes (McAdams, 2001; Clandinin et al., 2007). Program goals should emphasize creating space for storytelling and self-discovery, while recognizing that more profound cognitive shifts and agency development may emerge as secondary outcomes depending on participant readiness and contextual conditions (Gubrium, 2009; DiFulvio et al., 2016). Practitioners should attend carefully to individual circumstances and backgrounds, as these factors significantly influence whether and how empowerment manifests through the storytelling process.

5.5 Limitations and Future Directions

While these findings provide valuable insights into the theoretical mechanisms of digital storytelling from the storyteller's perspective, several limitations in the study design and scope must be acknowledged when interpreting these results. An inter-rater reliability assessment was conducted on 45% of coded segments due to resource constraints. Agreement rates varied significantly by theoretical framework, with narrative theory subthemes showing the highest average reliability (80.7%), empowerment theory subthemes showing moderate average reliability (70.3%), and transformative learning subthemes showing the lowest average reliability (43.7%).

This variation in inter-rater reliability suggests that narrative structure elements are more reliably identified than internal cognitive transformations, indicating these constructs may require different analytical approaches. Future studies would benefit from additional coder training or more detailed operational definitions. Moreover, the small sample size ~~for this study~~ provides great depth. However, with more digital stories selected for future studies, researchers could validate the findings, or new insights could emerge from the storyteller's perspective.

6. Conclusion

Future research could explore how digital storytelling operates across diverse social and cultural contexts, particularly within underrepresented or low-access populations. Given that empowerment outcomes varied by narrative context and community connection, further study is needed to examine the structural and relational conditions that enable storytellers to move from reflection to action. Similarly, the depth and durability of transformative learning processes, particularly how perspective shifts are sustained or evolve after storytelling, warrant longitudinal investigation. Applying the 3×3 framework in participatory or long-term studies could help clarify how digital storytelling contributes to sustained identity development, health behavior

change, or community advocacy over time. Finally, integrating audience analysis could expand our understanding of how these stories influence not only the storytellers but also those who receive and interpret them.

This study examined how digital storytelling functions as a learning tool by analyzing nine digital stories through three theoretical frameworks: Transformative Learning Theory, Narrative Theory, and Empowerment Theory. The analysis revealed that digital storytelling operates most consistently as a narrative learning tool that supports reflection and meaning-making, with strong but variable evidence for transformative learning and highly context-dependent outcomes in terms of empowerment. These findings provide evidence-based guidance for educators and practitioners on realistic expectations and optimal uses of digital storytelling programs.

This research contributes to the digital storytelling literature by providing systematic evidence for which learning theories best explain digital storytelling's educational impact (Gubrium, 2009; Robin, 2008). The study's multi-theoretical approach and rigorous coding methodology offer a replicable framework for evaluating digital storytelling programs, while the reliability findings highlight important distinctions between observable narrative processes and internal cognitive changes that require different assessment approaches (Nowell et al., 2017; Clandinin et al., 2007; Braun & Clark, 2006; Frank, 1995).

The variability in transformative learning and empowerment outcomes suggests several directions for future investigation. A planned mixed-methods follow-up study will incorporate participant interviews to capture better internal cognitive processes that may not be evident in story content alone (Palinkas et al., 2015). Additionally, longitudinal research examining digital storytelling's long-term impact could reveal whether transformation and empowerment emerge over extended time periods beyond initial story creation (Mazzoli Smith et al., 2024; Lohr et al., 2022; West et al., 2022).

Understanding how digital storytelling functions as a learning tool from the storyteller's perspective has important implications for educational practice in an increasingly digital world (Robin, 2008; Couldry, 2008). This research demonstrates that creating digital stories consistently helps individuals engage in reflection, meaning-making, and personal growth through narrative construction (Lambert, 2013; McAdams, 2001). While digital storytelling shows promise for helping individuals reframe personal experiences and shift their sense of identity, these transformational outcomes vary considerably among storytellers. Similarly, the development of a stronger personal voice and greater sense of agency through digital story creation is highly dependent on individual circumstances and readiness. By recognizing that digital storytelling reliably supports storytellers' meaning-making processes while unpredictably enabling transformation and empowerment, educators can implement programs that honor each

storyteller's unique journey and create conditions where deeper learning can emerge naturally (Haigh & Hardy, 2010; Elias & Brown, 2022).

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