

Review Article

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Enhancing EFL/ESL Learners' Willingness to Communicate through Digital Storytelling: A Systematic Literature Review

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Abstract

Background/purpose. While digital storytelling (DST) has been widely recognized for its pedagogical potential in language education, the extent to which DST fosters learners' willingness to communicate (WTC) in English as a Foreign Language/English as a Second Language contexts remains underexplored. This systematic literature review seeks to examine how DST contributes to the development of WTC by synthesizing current empirical evidence and identifying the underlying pedagogical mechanisms through which DST exerts its influence.

Materials/methods. To address this gap, the present study conducts a systematic literature review following PRISMA guidelines to synthesize empirical evidence on how DST facilitates WTC. A total of 20 peer-reviewed empirical studies published between 2020 and 2024 were retrieved from Scopus and Web of Science and analyzed using thematic analysis.

Results. Five pedagogical domains of DST emerged: identity-centered expression, cognitive engagement, emotional facilitation, collaborative design, and multimodal mediation. These domains contribute to different layers of WTC by reducing affective barriers, enhancing self-perceived competence, and fostering social connectedness and situational confidence. This review provides a conceptual map that bridges task-based instruction and affective-cognitive engagement, positioning DST as a holistic learning ecology rather than a mere storytelling technique.

Conclusion. The findings provide pedagogical guidance for creating communicative spaces in DST that enable learners to convey personal meaning in authentic language-use contexts. Limitations related to database scope, time range, and exclusion of theoretical literature are acknowledged, and future directions are proposed to broaden the search scope and incorporate theoretical insights for a more comprehensive understanding of DST's role in enhancing WTC.



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1. Introduction

In second language acquisition, willingness to communicate (WTC) has been recognized as a key determinant of learners' communicative success, influencing their active engagement in language use beyond the classroom (Kang, 2005; MacIntyre et al., 1998; Peng & Woodrow, 2010). WTC is conceptualized as a dynamic and multifaceted construct that integrates psychological, contextual, and linguistic factors, shaping a learner's decision to initiate communication in the target language. In English as a foreign language (EFL) or English as a second language (ESL) classrooms, facilitating learners' WTC remains a persistent pedagogical challenge. Conventional classroom practices often fail to fully engage learners affectively or socially, which limits their communicative output and confidence. This highlights the need for pedagogical approaches that address both the emotional and contextual dimensions of language learning.

Digital storytelling (DST) integrates verbal, visual, and auditory modes and has shown potential to reduce anxiety, enhance motivation, and foster learner agency (Robin, 2006; Ohler, 2013). Grounded in constructivist and sociocultural theories, DST enables learners to make meaning of their experiences through narrative construction, thereby promoting both cognitive engagement and emotional development in language learning contexts (Lambert, 2010; Sadik, 2008). As Yoon (2013) suggests, DST can significantly motivate EFL learners by offering them a personally meaningful and authentic context in which to express themselves, thereby enhancing their communicative confidence and willingness to participate in English.

However, its impact on the complex, multi-layered nature of WTC has yet to be systematically analyzed. Therefore, this systematic literature review draws upon two key theoretical models: Ohler's (2013) five-phase DST process model and MacIntyre et al.'s (1998) WTC pyramid model, offering a dual-theoretical lens to explore how DST practices influence the psychological and contextual factors that shape learners' WTC.

Accordingly, the study seeks to answer the following two research questions:

1. What constructs emerge in each phase of DST according to Ohler's (2013) 5-phase model, and how can these be categorized into broader domains that contribute to EFL/ESL learners' WTC?
2. How do the identified constructs across different DST phases foster learners' WTC at different layers, as conceptualized in MacIntyre et al.'s (1998) pyramid model?

By synthesizing recent empirical findings and theoretical advancements, this review aims to provide evidence-based insights into how DST can be effectively implemented to enhance WTC, thereby informing both pedagogical practice and future research.

2. Literature Review

2.1. Theoretical Foundation of WTC

MacIntyre et al.'s (1998) heuristic model of WTC conceptualizes it as a six-layer pyramid, integrating both enduring influences (such as personality and intergroup climate) and situational antecedents (such as state anxiety and desire to communicate). The model illustrates how factors interact in real-time to influence the learner's readiness to communicate.

This model emphasizes that WTC is not merely a trait-like quality but a situationally variable construct that can be positively shaped by appropriate pedagogical conditions. Consequently, instructional practices and learning environments that enhance affective engagement, reduce learner anxiety, and foster supportive classroom interaction play a crucial role in developing learners' WTC (Kang, 2005; MacIntyre et al., 1998; Peng, 2012).

2.2. Overview of DST in Language Education

In response to pedagogical challenges, researchers and educators have increasingly turned to innovative instructional methods that can address the affective and social dimensions of language learning. Among these, DST has gained significant traction in recent years as a multimodal, interactive, and learner-centered approach to second language education. DST combines traditional narrative elements with digital multimedia tools—including images, voice recordings, background music, video clips, and text overlays—to create immersive language learning experiences (Robin, 2008; Sadik, 2008; Yang & Wu, 2012). Unlike conventional storytelling, DST enables learners to blend verbal, visual, and auditory modalities in their narratives, promoting deeper linguistic engagement and facilitating emotional resonance, personal expression, and creative meaning-making (Robin, 2008). The integration of multiple semiotic modes serves to enrich linguistic production as well as to develop learners' digital literacy and communicative competence, both of which are vital in modern language education (Hafner, 2014).

2.3. Empirical Findings on DST's Effect on WTC

A growing body of empirical research has demonstrated the effectiveness of DST in enhancing EFL/ESL learners' speaking skills, vocabulary, confidence, and classroom participation (Çakmak & Andujar, 2025; G. L. Liu et al., 2024; K.-P. Liu et al., 2018). Studies have shown that DST tasks help learners gain confidence and reduce anxiety in oral language use (Bai & Xian, 2024; Fu et al., 2022). In addition, the collaborative nature of DST projects fosters peer interaction and social support, which in turn mitigates anxiety and enhances learners' perceived communicative competence—both of which are critical factors within the WTC model (Del-Moral-Pérez et al., 2019; Kim et al., 2022; Nishioka, 2016). Furthermore, the process of designing and presenting digital stories encourages learners to take ownership of their learning, develop their learner identity, and engage more fully in language tasks, thereby positively influencing their motivation and willingness to participate in communicative acts (García Pastor, 2018; Hafner & Miller, 2011; Sylvester & Greenidge, 2009; Tamimi, 2024).

2.4. Research Gap

Despite these promising developments, existing research on DST and WTC remains fragmented and lacks theoretical integration. Most studies focus on isolated linguistic outcomes without systematically examining how DST affects the multi-layered components of WTC. Few studies have explicitly employed MacIntyre et al.'s (1998) WTC model to interpret DST's influence, leaving unclear which components—such as self-confidence, motivation, or classroom dynamics—are most affected. Furthermore, there is limited understanding of how specific phases of DST (e.g., planning, scripting, production) contribute to WTC development, or how these phases align with affective, cognitive, and contextual dimensions of WTC.

2.5. Theoretical Framework: Integrating DST Process and WTC Pyramid

To explore how DST influences learners' WTC, this study adopts a dual-theoretical framework that combines Ohler's (2013) five-phase DST model and MacIntyre et al.'s (1998) WTC pyramid model. This integration enables a structured analysis of both the pedagogical process (i.e., what learners do during DST) and the psychological outcomes (i.e., how these experiences affect their WTC). While Ohler's (2013) model outlines the sequential stages of DST tasks, MacIntyre et al.'s (1998) model maps the complex, multilevel factors that influence language learners' communicative behavior. Together, these models offer a robust interpretive lens for understanding the cognitive, affective, and contextual mechanisms through which DST impacts WTC.

Ohler (2013) proposed a five-phase model for DST, consisting of (1) Story Planning, (2) Preproduction, (3) Production, (4) Postproduction, and (5) Performance, Posting, Showing, and

Distribution. Each phase fosters different cognitive, emotional, and collaborative engagements. For example, story production encourages language output and reflective thinking, while the last phase enhances ownership and audience awareness. These phases serve as useful analytical units to trace how DST scaffolds the affective and communicative development of learners.

MacIntyre et al.'s (1998) pyramid model of WTC (Figure 1) is organized into six layers, with Layer I (Communication Behavior) representing the act of communication, and Layer VI (Social and Individual Context) representing foundational influences. Middle layers involve behavioral intention, situated antecedents, motivational propensities, and affective-cognitive context.

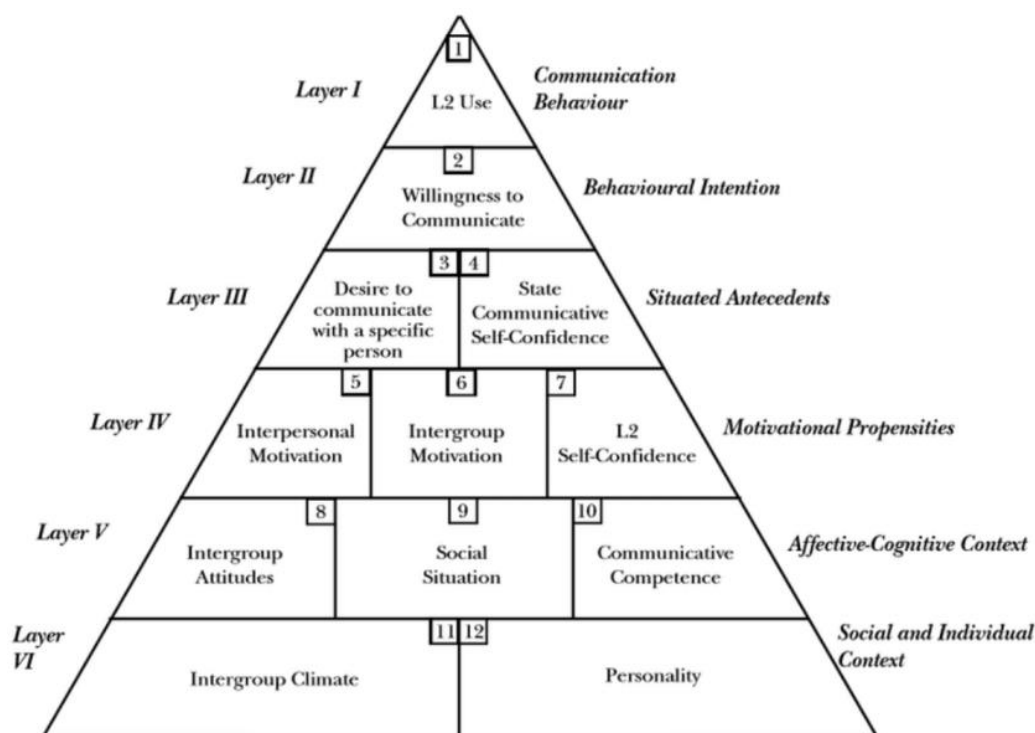


Figure 1. The Pyramid Model of WTC (from MacIntyre et al., 1998)

This model enables a layered analysis of how interventions like DST affect WTC, e.g., self-confidence in Layer IV, motivation in Layer IV, or peer interaction in Layer III. Understanding these interrelations provides a theoretical lens for exploring how DST influences learners' communicative willingness at various levels.

This dual-framework approach enables a phase-by-phase examination of DST practices while concurrently mapping them to key psychological and situational layers of WTC.

3. Methodology

The primary aim was to explore how DST facilitates EFL/ESL learners' WTC, focusing on affective, cognitive, and sociocultural mechanisms.

3.1. Research Design

This systematic review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021) to ensure transparency and methodological rigor. The review process was structured around the following stages: (1) defining research questions and specifying inclusion/exclusion criteria; (2) identifying suitable databases and developing a comprehensive search strategy using Boolean combinations of keywords; (3) conducting database searches and exporting records into a reference manager; (4) screening titles and abstracts, followed by full-text reviews based on pre-established criteria; (5) applying inter-rater reliability checks to ensure consistency in screening decisions; and (6) synthesizing findings through thematic coding.

A total of 20 empirical studies published between 2020 and 2024 were included. Thematic analysis (Braun & Clarke, 2006) was employed to identify patterns across studies, using a hybrid deductive-inductive approach. Deductively, Ohler's (2013) five-phase DST framework and MacIntyre et al.'s (1998) WTC model were used as guiding models. Inductively, emergent themes were identified through close reading and coding of findings and discussions.

3.2. Data Collection

This review focused exclusively on peer-reviewed journal articles addressing digital storytelling and willingness to communicate. To maintain a high standard of source quality, the search was limited to two reputable academic databases: Scopus and Web of Science.

In order to ensure the comprehensiveness and theoretical consistency of the systematic literature review, this study constructed search keywords based on MacIntyre et al.'s (1998) heuristic model of WTC, which is widely recognized as a foundational theoretical framework in second language (L2) communication studies. The model proposes a six-layer pyramid structure, encompassing variables from immediate communicative behavior (Layer I) to broader social and individual contexts (Layer VI), thereby offering a multidimensional understanding of learners' communication behaviors.

Given that DST is a pedagogical tool that influences learners' communication from affective, motivational, social, and cognitive dimensions (Robin, 2008; Yang & Wu, 2012), each search keyword group was carefully aligned with the specific constructs in the WTC model to investigate the impact of DST on corresponding aspects of L2 learners' WTC.

The primary keyword "digital storytelling" was expanded to include "multimodal storytelling" and the acronym "DST" to capture a broader scope of relevant literature. To enhance both sensitivity and specificity, synonyms and relevant expressions were included in each keyword group using Boolean operators (OR/AND). For example, keywords for Layer II included "willingness to communicate", "WTC", and "communication intention"; for Layer IV, terms such as "interpersonal motivation", "peer interaction", and "peer collaboration" were employed. Each WTC layer represents a distinct domain influencing L2 learners' communicative behavior, and corresponding keywords were generated to capture literature addressing each domain.

The WTC-related keywords were grouped according to the layers and domains of the model, as follows (Table 1):

Table 1. WTC-Related Search Keywords

Layers in MacIntyre et al.'s (1998) WTC model		Search keywords
Layer I	L2 Use	("L2 use" OR "language use" OR "language production")
Layer II	Willingness to Communicate	("willingness to communicate" OR "WTC" OR "communication intention")
Layer III	Desire to Communicate	("desire to communicate" OR "communicative desire")
	Communicative Self-confidence	("self-confidence" OR "L2 confidence")

Layer IV	Interpersonal Motivation	("interpersonal motivation" OR "peer interaction" OR "peer collaboration")
	Intergroup Motivation	("intergroup motivation" OR "intercultural motivation")
	L2 Self-Confidence	("L2 self-confidence" OR "language confidence")
Layer V	Intergroup Attitudes	("intergroup attitudes" OR "language attitude" OR "cultural attitude")
	Social Situation	("social context" OR "social interaction" OR "peer group")
	Communicative Competence	("communicative competence" OR "language proficiency" OR "oral fluency")
Layer VI	Intergroup Climate	("intergroup climate" OR "learning environment" OR "classroom climate")
	Personality	("personality" OR "learner traits" OR "introversion" OR "extraversion")

To ensure consistency and precision, the WTC-related keywords were combined using Boolean operators (OR within each domain group and AND between DST and WTC keywords). For example, the keyword string for Layer II was constructed as:

("digital storytelling" OR "multimodal storytelling" OR "DST") AND ("willingness to communicate" OR "WTC" OR "communication intention").

This approach allowed the review to comprehensively capture the scope of existing research examining the relationship between DST and each dimension of WTC. The included articles must be journal papers published between 2020 and 2024 and written in English. Articles are excluded if they are books, dissertations, conference papers, proceedings or reviews.

Screening is the process of applying predefined inclusion and exclusion criteria to identify relevant studies for a systematic literature review (Moher et al., 2009). This study applied both inclusion and exclusion criteria to guide the selection process. These criteria help ensure that all chosen articles provide relevant and meaningful contributions to the systematic literature review (see Table 2).

Table 2. Inclusion and Exclusion Criteria

Inclusion criteria	Exclusion criteria
· Conducted in EFL/ESL environments	· Research for native speakers
· Incorporate digital storytelling	· Not incorporate digital storytelling
· Study reports empirical findings	· Study does not report empirical findings
	· Off-topic(i.e. not relevant to the topic under study)

The articles are excluded if they are not about EFL/ESL, if they don't use digital storytelling, or if they are not related to the research topic. These rules help make sure the articles are useful and on-topic.

3.3. Literature Screening and PRISMA Flow

PRISMA principles are followed in Figure 2. Two significant academic databases, Scopus ($n = 442$) and Web of Science ($n = 378$), yielded a total of 820 records at first. Before the screening process, 605 records were removed due to not meeting the inclusion criteria, which required publications to be peer-reviewed journal articles in English, published between 2020 and 2024. Excluded items also included books, dissertations, conference proceedings, and review articles. There were 217 records left for screening following this first elimination. Following the removal of 48 duplicate data, 169 records remained for screening by title and abstract. At this point, 119 records were eliminated based on their relevance. The eligibility of the remaining 48 full-text publications was evaluated. A total of 28 articles were disqualified according to the following standards: 23 were carried out outside of EFL/ESL contexts, three lacked empirical support, and two did not make digital storytelling a primary focus.

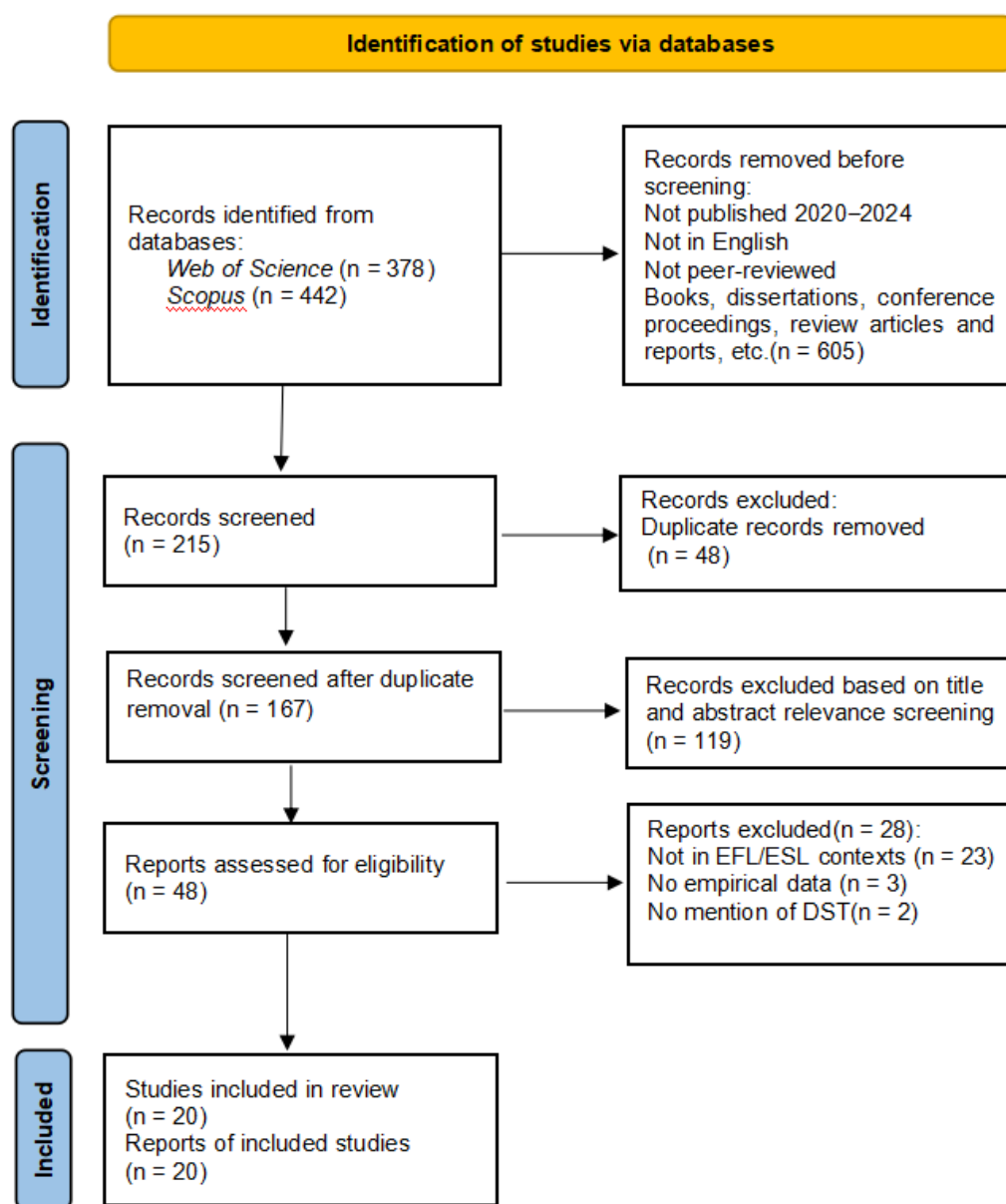


Figure 2. Adapted PRISMA 2020 Flow Diagram (Source: Page et al., 2021)

In the end, 20 studies were included in the final review after meeting all inclusion requirements.

Data from the final corpus of studies was extracted using a structured Excel matrix, capturing variables such as DST phases, instruments, WTC outcomes, and findings.

3.4. Data Analysis

To ensure methodological consistency and traceability, several instruments were employed throughout the analysis process. An inclusion/exclusion checklist was used to guide screening decisions. For the qualitative synthesis, a thematic coding framework was developed based on Ohler's (2013) five-phase DST model and MacIntyre et al.'s (1998) WTC pyramid. Braun and Clarke's (2006) six-step thematic analysis procedure was adopted to identify patterns and emergent domains.

A total of 20 peer-reviewed studies were first read repeatedly for familiarization, with attention paid to how DST was implemented, what learner outcomes were reported, and how those outcomes related to affective or communicative development. In the second step, initial codes were extracted from each study, focusing on observed pedagogical practices, learner behaviors, emotional responses, and reported WTC-related changes. Coding was conducted through a deductive-inductive hybrid approach: deductively guided by Ohler's (2013) five-phase DST model, while allowing inductive patterns to emerge across studies. In the third step, these codes were grouped thematically based on recurrent patterns across DST phases, resulting in the emergence of five overarching domains: identity-centered expression, cognitive engagement, emotional facilitation, collaborative design, and multimodal mediation, which provided the analytical structure for the subsequent Results and Discussion sections. In the fourth step, these themes were reviewed for consistency and distinctiveness, ensuring that each domain captured a unique but interconnected aspect of how DST influenced learners. In the fifth step, the final themes were clearly defined, and each was mapped to specific layers of MacIntyre et al.'s (1998) WTC pyramid model to analyze how DST contributes to learners' communicative readiness—from affective filtering and motivation to situational confidence and actual communicative behavior. In the final step, a theory-driven synthesis was produced, integrating empirical findings with the dual theoretical framework. Through this process, the review identified key learner outcomes associated with DST and clarified how DST practices correspond to the multi-layered psychological dynamics of willingness to communicate.

4. Results

Through iterative clustering and theory-guided interpretation, the research team discussed and refined the initial codes into higher-order themes, which were then synthesized into constructs and subsequently into broader domains.

4.1. Overview of DST Constructs Contributing to WTC

To address the first research question, this study applied Ohler's (2013) five-phase DST model as an analytical framework to categorize and interpret DST-related constructs. The model includes Story Planning, Preproduction, Production, Postproduction, and Performance and Distribution, each representing distinct instructional tasks and cognitive focuses within the storytelling process.

Constructs identified from 20 empirical studies were systematically categorized into these five phases using a combination of semantic analysis and functional task alignment. Keywords reflecting construct meanings (e.g., topic relevance, voice monitoring, visual integration) were matched to the pedagogical function and instructional stage in which they appeared (see Table 3).

Table 3. Constructs Supporting WTC in Each DST Phase

DST Phase	Constructs
Phase I: Story Planning	theme relevance awareness, emotional engagement, identity formation
Phase II: Preproduction	scriptwriting, message clarity control, narrative coherence, the ability to pre-structure content
Phase III: Production	fluency building, pronunciation and intonation monitoring, enhancement of expressive confidence, self-correction based on voice feedback
Phase IV: Postproduction	visual-verbal alignment, symbolic coherence, message economy
Phase V: Performance, Posting, Showing, and Distribution	audience engagement awareness, peer-responsive presentation, social validation

4.1.1. Story Planning: Activating Topic Relevance and Communicative Motivation

In the Story Planning phase, key constructs identified include theme relevance awareness, emotional engagement, and identity formation. These constructs provide an entry point for learners' self-expression and help stimulate their intrinsic motivation to communicate.

Students demonstrated greater emotional involvement and linguistic engagement when selecting topics closely tied to their own experiences, culture, or interests. This alignment between personal relevance and task theme helped reduce communicative anxiety while simultaneously enhancing learners' sense of purpose in storytelling, as shown in studies highlighting learners' preferences for familiar and meaningful content (De Caro-Barek, 2022; Fu et al., 2022; Humairoh, 2023). For instance, Humairoh (2023) and Al-Amri (2020) reported that students demonstrated greater linguistic engagement and emotional involvement when discussing personal experiences, cultural backgrounds, or genuine feelings.

In the planning stage, students developed a stronger sense of ownership over their message by drawing on personal memories and cultural experiences, which provided a meaningful foundation for self-expression and reflection. Humairoh (2023) demonstrated how undergraduate students in Indonesia strengthened their cultural identity by incorporating traditional values and family histories into their stories, thereby making expression more meaningful and authentic. Similarly, Al Ghaithi et al. (2023) found that learners reflected more deeply on their own experiences and ideas during the initial stages of story construction, which facilitated stronger engagement with the content.

In addition, several studies highlighted that topic selection often coincides with identity construction. In other studies (e.g. Pandhiani, 2024; Shen et al., 2024), students engaged in self-reflection on their identity during the story planning phase. For instance, when responding to prompts such as "Who am I", learners began exploring their personal experiences and articulating emerging identities in English. Pandhiani (2024) further reported that some students repositioned themselves from passive learners to empowered English users. This suggests that the activation of WTC in the Story Planning phase is not only driven by topic familiarity, but also involves initial identity positioning and the emergence of a desire to express oneself.

4.1.2. Preproduction: Pre-activation of Structural Organization and Language Construction

In the Preproduction stage, the constructs mainly focus on scriptwriting, message clarity control, narrative coherence, and the ability to pre-structure content. During this phase, students continuously brainstorm, write, and revise their content structure, developing a clearer and more logical framework for expression, which lays the foundation for subsequent oral output. Among the 20 articles, 9 explicitly address task design in the Preproduction stage and its impact on learners' expressive behaviors. For example, the study by González Mesa (2020) demonstrates that students engaged in multiple rounds of planning and script revision, which significantly improved the coherence and accuracy of their writing. Through reflective revisions and collaborative feedback, learners enhanced both structural clarity and narrative logic in their digital stories. As reported in Al Ghaithi et al. (2023), students revised their DST scripts at least twice based on teacher feedback, suggesting an iterative process of refinement. Although the study focused on vocabulary acquisition, the revision process also implicitly contributed to clearer and more organized language use.

As illustrated in Fan (2024), students reported that the scripting process encouraged them to carefully consider their language use, including vocabulary precision and phrasing strategies. Similarly, students underwent at least three stages of script revision—from the initial draft to peer-reviewed revisions and final production—with a focus on improving linguistic accuracy, narrative flow, and coherence (Zarei & Navidinia, 2024). Through these processes, students developed stronger skills in organizing language and gained a greater sense of control over their output, leading to reduced anxiety during communication. In Pandhiani (2024), some learners described how the scripting process marked a shift in their language use—from merely speaking to consciously constructing logical and structured content. One student reflected on moving from rote repetition to more deliberate organization, suggesting enhanced awareness of coherence and message clarity during script development. Moreover, articles such as Huang (2023) and Fu et al. (2022) indicate that the storyboard, as a tool for pre-structuring expression, further assisted students in grasping the overall storyline from a macro perspective and enhanced the coherence of their narratives. For example, the storyboard structure embedded in Toontastic helped students better organize their ideas and clarify their message during the planning process (Fu et al., 2022). In De Caro-Barek (2022), a narrative structure was embedded into the course design to facilitate learners' macro-level organization and logical sequencing of content. These design features served to activate structural planning and enhance message coherence at the initial stages of expression.

4.1.3. Production: Development of Fluency and Confidence in Expression

In the Production stage, learners begin formal voice recording and language output. The key constructs at this stage include fluency building, pronunciation and intonation monitoring, enhancement of expressive confidence, and self-correction based on voice feedback. Among the 20 analyzed studies, 7 explicitly reported observable changes in learners' language performance during voice recording and oral practice activities. Most of these studies found that repeated recording attempts encouraged students to continuously adjust and refine their expressive delivery. For example, the study of Luan et al. (2024) found that the voice-recording task in the DST project boosted both their speaking confidence and oral proficiency. The repeated practice in a low-anxiety online environment provided a safe space for learners to gain control over their spoken output. Similarly, Al-Amri (2020) reported that students repeated their recordings multiple times, which helped them improve pronunciation, rhythm, and intonation. This process contributed to greater phonological control and speaking fluency.

These voice recording practices were not merely technical operations but also served as a process of self-monitoring and heightened language awareness for students. It is reported that

repeated rehearsal and refinement of narratives in the DST process helped students reduce performance anxiety and become more confident in oral expression (Bai & Xian, 2024). Findings from Hava (2021) revealed that recording English texts enhanced students' pronunciation and contributed to greater speaking confidence. The structured DST process, involving multiple rounds of drafting and audio production, created a learner-friendly space for oral output and may have helped reduce performance pressure.

Moreover, some studies (Al-Amri, 2020; Bin Jwair, 2023) highlighted the emotional regulation function of voice-based output tasks, which allowed learners to rehearse spoken expression in a private and controlled setting. This process, in turn, enhanced their communicative confidence when engaging with real audiences. At this stage, learners were not merely practicing oral language, but also undergoing a psychological shift—from internal construction of meaning to external communicative behavior—facilitated by the act of hearing themselves speak.

4.1.4. Postproduction: Multimodal Integration and the Refinement of Expression

In the Post-production stage, students primarily engage in the integration and editing of multimodalities—such as images, text, video, and voice—to enhance the accuracy, coherence, and expressiveness of their communication. The key constructs identified at this stage include visual-verbal alignment, symbolic coherence, and message economy. Among the 20 analyzed articles, more than 10 emphasized the critical role of this stage in enhancing students' overall expressive abilities. As reported in the study by Makarova and Pirozhkova (2021), the process of creating and presenting digital stories encouraged students to refine their content, align visual and verbal elements effectively, and improve communicative clarity through structured revision stages. As demonstrated in Bai and Xian (2024), the multimodal affordances of DST allowed learners to reflect on how images, narration, and visuals interact, helping them organize meaning and reduce the pressure associated with traditional speech tasks. Bin Jwair (2023) reported that the integration of visual cues with storytelling practices contributed to more engaging and effective vocabulary learning experiences, reinforcing the role of multimodal support in enhancing learners' linguistic development.

Many learners began to actively consider modes of expression beyond language at this stage. As reported by Fu et al. (2022), learners reflected that the process of arranging visuals alongside their narratives helped them clarify their intended meanings and better organize their storylines. As illustrated by Zarei and Navidinia (2024), students' reflection and revision during the postproduction phase allowed them to identify redundant parts and refine their ideas for clarity and impact, thereby enhancing their narrative coherence and rhetorical effectiveness.

During the postproduction stage, students refined their stories by reviewing and reorganizing existing content. Several participants noted that selecting and arranging images helped clarify the intended message, and trimming redundant segments enhanced the overall coherence (Zarei & Navidinia, 2024). While not generating new sentences, this process supported learners' awareness of how multimodal elements functioned together, particularly how visuals could reinforce or distract from the spoken narration (Hull & Nelson, 2005). These refinements were often accompanied by stronger confidence in their communicative output (Bai & Xian, 2024).

4.1.5. Performance, Posting, and Distribution: Expressive Confidence and Social Engagement through Performance

In this stage, students present and share their DST products, typically through classroom presentations, online publishing, or public evaluation. Key constructs at this stage include audience engagement awareness, peer-responsive presentation and social validation. The analysis shows that approximately eight studies explicitly highlight the positive impact of the performance stage on students' WTC. Across multiple studies, participants indicated that the awareness of an audience

prompted more careful revisions and improved oral performance, and enhanced their motivation to communicate meaningfully. For instance, Meletiadou (2022) found that learners invested more effort in refining their digital stories when they anticipated sharing them with peers or the public. In Zarei and Navidinia (2024), students reported feeling that their contributions were valued when they observed peer reactions to their stories. Similarly, Hava (2021) found that the public sharing aspect of DST boosted students' self-confidence and motivation, indicating that audience awareness encouraged more intentional and engaged expression. This pattern was also observed in both quantitative and qualitative findings (Huang, 2023) and was further supported by the identity-based empowerment narratives reported in Pandhiani (2024), where students actively repositioned themselves as competent speakers through public digital performances.

4.2. Manifestations of Learners' WTC across the Six Layers in the DST Context

The studies were mapped onto MacIntyre et al.'s (1998) six-layer WTC pyramid model. The results reveal that Layer IV: Motivational Propensities (e.g., persistence, engagement, enjoyment) was the most frequently promoted aspect, appearing in 20 studies. This is followed by Layer III: Situated Antecedents, mainly focusing on anxiety reduction and confidence building (18 studies), and Layer V: Affective-Cognitive Context, emphasizing reflection, emotional connection, and cognitive awareness (15 studies). The subsequent analysis introduces the layers of the WTC model in order of their frequency of occurrence across the reviewed studies, from highest to lowest.

4.2.1. Motivational Propensities (Layer IV)

The 20 studies included in this review all consistently stated that DST increased learners' motivation, highlighting its inherent consistency with Motivational Propensities, Layer IV of MacIntyre et al.'s (1998) WTC pyramid. The studies' frequent use of keywords like engagement, curiosity, task enjoyment, and personal relevance reflects the high level of emotional and cognitive activity that DST tasks cause in its participants. Authors commented, for example, DST supported autonomy (Al Ghaithi et al., 2023; Bai & Xian, 2024). In DST-based tasks, authenticity is primarily reflected in different aspects: real-life topic relevance (De Caro-Barek, 2022; Humairoh, 2023), authentic communicative purpose (Bai & Xian, 2024; Hava, 2021; Huang, 2023; Humairoh, 2023) and perceived task value (Fan, 2024; Zarei & Navidinia, 2024). The DST experience of creating a video made the student to assume the role of a director, fostering a sense of creative control and authorship (Shen et al., 2024). Similarly, by positioning themselves as competent speakers, students demonstrated a sense of creative ownership in DST tasks (Pandhiani, 2024).

4.2.2. Situated Antecedents (Layer III)

DST was found to have a considerable impact on the situated antecedents of WTC in the reviewed research, namely in terms of fostering confidence, reducing language anxiety, and creating a psychologically secure environment for oral expression. In the articles, terms like confidence, anxiety reduction, safety, and rehearsing are often used to emphasize how DST changes the immediate situation in which students communicate.

A non-threatening context of DST environment often reduces students' burden of real-time correction and public criticism, allowing them to engage with language more freely (Fu et al., 2022; Huang, 2023; Luan et al., 2024; Meletiadou, 2022; Nair & Md Yunus, 2022; Raffone, 2022). Repeated practice—through scripting, rehearsing, and re-recording narratives—enables students to iteratively refine their language output, resulting in observable gains in fluency and a fortified sense of confidence (Al-Amri, 2020; Fan, 2024; Shen et al., 2024; Zarei & Navidinia, 2024). Mobile-assisted DST, particularly when conducted in familiar environments (e.g., home or dormitory), fosters a low-stress learning atmosphere conducive to authentic language production (Al Ghaithi et al., 2023;

González Mesa, 2020). Bai and Xian (2024) reported a statistically significant reduction in foreign language anxiety following DST tasks, as measured by the Foreign Language Classroom Anxiety Scale.

4.2.3. Affective-Cognitive Context (Layer V)

DST has been shown to significantly improve the affective-cognitive environment of students' communicative involvement in the assessed studies, particularly through strengthening emotional connections, encouraging identity exploration, and boosting metacognitive reflection. The reviewed literature consistently highlights how DST enhances language development while simultaneously fostering emotional connection, reflective thinking, identity awareness, and metacognitive engagement, thereby offering learners a platform to construct meaning and communicate their individual voices with greater depth and authenticity.

By narrating personal or culturally meaningful stories, learners engage in identity construction, using language to reflect on self and others (Humairoh, 2023; Pandhiani, 2024). This highlights the shift toward an authentic purpose for language use—from a focus on form to meaning—which in turn deepens learners' communicative intent. The process reframes language output as a purposeful and learner-driven practice of constructing meaning (Al-Amri, 2020; Bai & Xian, 2024; Fu et al., 2022; Shen et al., 2024; Zarei & Navidinia, 2024). Multimodal encoding, with the combination of images, voice, and sound, promotes deeper semantic processing, which leads to more integrated understanding and lasting retention (Al-Amri, 2020; De Caro-Barek, 2022; Fan, 2024; Makarova & Pirozhkova, 2021; Peña-Acuña & Navarro-Martínez, 2024; Raffone, 2022).

4.2.4. Social and Intergroup Context (Layer VI)

A consistent finding across the reviewed studies was the significant influence of DST on the social and intergroup dynamics that contribute to learners' WTC. Recurring themes such as peer collaboration, relationship building, and communities of practice underscored DST's ability to promote dialogic interaction, mutual support, and a sense of belonging—critical factors in fostering oral language use in EFL/ESL contexts.

Students participated in collaborative authorship to co-construct narrative texts, a process encompassing shared script creation, negotiated voice assignment, and joint editorial decision-making (De Caro-Barek, 2022; Fan, 2024; Fu et al., 2022; Zarei & Navidinia, 2024). This collaborative approach enhanced interpersonal connection and mutual responsibility, both of which are essential for triggering and maintaining EFL/ESL interaction, in addition to optimizing cognitive load distribution among learners.

Studies such as González Mesa (2020) and Luan et al. (2024) have demonstrated that the strategic allocation of task-specific roles (e.g. narrative composer, visual designer, or dialogue editor) effectively scaffolds differentiated participation, thereby accommodating learners' diverse competencies within collaborative tasks. Through DST-mediated cross-cultural negotiation and identity positioning, students synthesized their multilingual lived experiences (home/university/online contexts) into shared stories (Pandhiani, 2024) that fostered peer solidarity and community belonging (Makarova & Pirozhkova, 2021; Meletiadou, 2022).

4.2.5. Communication Behavior (Layer I)

Although communication behavior serves as the final and most visible stage of MacIntyre et. al's (1998) WTC model, it was only the second least frequently observed layer in the reviewed studies. Keywords such as oral production, real-time speaking, and performative delivery appeared occasionally, reflecting a modest but meaningful emphasis on learners' observable communicative output.

DST provides meaningful opportunities for students to develop communication behaviors, especially through performative tasks. For instance, in Fan's (2024) and Hava's (2021) research, students reported feeling more comfortable and speaking more clearly after several rounds of practice, which helped them improve both their pronunciation and expressive delivery. Bai and Xian (2024) noted that DST tasks promoted authentic language use by engaging students in meaningful, real-world contexts. The findings of Fu et al. (2022), González Mesa (2020), Humairoh (2023) and Luan et al. (2024) observed that the process of narrating personal stories synchronized with multimodal elements enhanced learners' oral fluency, speech rhythm, and intonation patterns.

4.2.6. Behavioral Intention (Layer II)

Behavioral intention, located between situated antecedents and actual communicative behavior, reflects the learner's conscious decision to engage in communication. Within the context of DST, this layer reflects the learner's willingness to participate in communicative tasks prior to actual performance. Keywords such as desire to speak, multimedia willingness, and topic complexity illustrate the ways in which DST shapes learners' willingness to engage in communication.

DST primarily shaped behavioral intention by fostering personalization and emotional closeness to the task. Learners expressed higher willingness to communicate when topics were personally relevant and involved low-anxiety environments (De Caro-Barek, 2022; Fu et al., 2022; González Mesa, 2020). Some studies emphasized that participants chose their own multimedia elements (images, audio or video) to enhance their stories, showing active involvement in shaping both emotional and storytelling aspects (Al-Amri, 2020). Learners who perceived DST tasks as enjoyable, novel, or personally meaningful were more likely to report a willingness to communicate, even before actual language production occurred (Al Ghaithi et al., 2023; Fan, 2024; Huang, 2023).

5. Discussion

This section discusses the study's findings in relation to the two research questions. First, it examines how specific domains of DST contributed to enhancing learners' WTC (RQ1). Then, it interprets how learners' WTC manifested across the six layers of the WTC model within the DST context (RQ2).

5.1. Discussion of RQ1: Five Domains of DST

This study focuses on the core question of how the constructs and domains of DST contribute to enhancing EFL learners' WTC. In the preceding results section, the present study systematically examined the key constructs and empirical findings associated with each phase of DST based on Ohler's (2013) model. A closer examination of the constructs emerging from each DST phase reveals their convergence into five broader domains—identity-centered expression, cognitive engagement, emotional facilitation, collaborative design, and multimodal mediation.

For example, as illustrated in Figure 3, constructs emerging from the Story Planning and Preproduction phases—such as theme relevance awareness, identity formation, and scriptwriting—primarily support the domains of identity-centered expression and cognitive engagement, as learners begin to align personal meaning with narrative structure.

During the Production and Postproduction stages, constructs like fluency building and voice-based self-correction contribute largely to cognitive engagement, while also facilitating emotional development by fostering greater confidence and expressive control. Constructs such as visual-verbal alignment and symbolic coherence further exemplify the domain of multimodal mediation, enabling learners to synthesize linguistic and visual elements.

Finally, in the last phase, constructs like peer-responsive presentation and social validation clearly align with collaborative design, highlighting the role of audience interaction and peer feedback in strengthening communicative intent and social motivation.

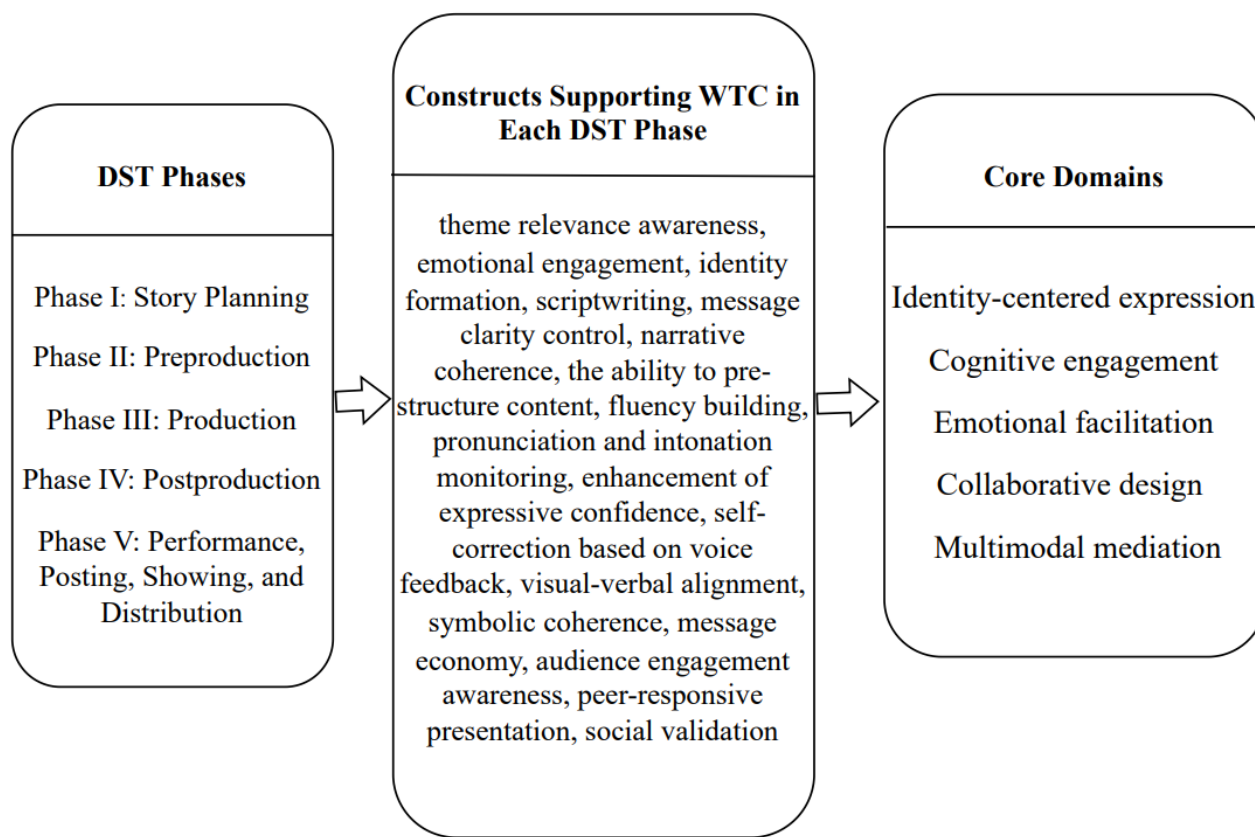


Figure 3. Mapping DST Phases to Constructs and Thematic Domains

These domains do not function independently. Instead, they interact across DST phases to scaffold learners' WTC. By working together, these domains support the development of linguistic competence and also play a critical role in building learners' confidence, a sense of agency, and motivation—key drivers of WTC growth in EFL/ESL contexts.

5.1.1. Identity-Centered Expression

Identity-centered expression emerged as a key domain in the reviewed literature, emphasizing the role of self-representation, personal narrative, and social engagement in DST. This section synthesizes how four interrelated constructs—identity formation, narrative coherence, peer-responsive presentation, and social validation—collectively support the development of EFL learners' WTC.

DST has been widely recognized as a means of fostering identity-centered expression, enabling learners to explore, construct, and share their personal and cultural identities in English. This domain encompasses constructs such as identity formation, where students reflect on who they are and where they come from (e.g. Pandhiani, 2024; Shen et al., 2024), and narrative coherence, which supports learners in organizing their experiences into logical and meaningful storytelling (González Mesa, 2020). Peer-responsive presentation allows students to adjust their expression based on audience feedback, fostering communicative awareness (Meletiadou, 2022), while social validation—in the form of peer or teacher recognition—reinforces learners' confidence and motivation to speak (Hava, 2021).

Together, these elements contribute to a supportive communicative context aligned with the affective and motivational layers of MacIntyre et al.'s (1998) WTC model. Identity formation and narrative coherence strengthen learners' self-awareness and perceived communicative competence, which are key affective-motivational precursors of WTC. Meanwhile, peer-responsive presentation and social validation create supportive interpersonal dynamics that enhance learners' situational confidence and willingness to participate in communicative tasks. These findings underscore the potential of DST to promote learner agency and voice, thereby fostering a more communication-ready mindset among EFL learners (MacIntyre et al., 1998).

These findings are further supported by Norton's (2000) theory of investment, which posits that learners are more willing to communicate when they perceive that language use enables them to construct and affirm meaningful identities in socially valued ways. This theoretical stance aligns with prior research. For instance, Hafner and Miller (2011) emphasized that digital multimodal tasks empower learners to integrate personal experiences into language production, which strengthens their communicative agency. Similarly, Kim et al. (2022) demonstrated that DST promotes self-reflection and identity awareness, especially in EFL contexts where learners often struggle with linguistic confidence. However, this review contributes further by showing that such identity-centered expression varies across DST phases—e.g., cultural positioning is more prominent during the planning and scripting stages, while emotional projection often surfaces in performance and feedback.

The pedagogical implication is that DST provides a narrative space where learners negotiate identity through English, enhancing their affective engagement and perceived authenticity of communication. From a theoretical lens, this aligns with the upper layers of MacIntyre et al.'s (1998) WTC pyramid—especially in shaping motivation, self-confidence, and communicative intention. Thus, embedding identity-driven tasks in DST can serve as an affective gateway to increased WTC.

5.1.2. Cognitive Engagement

Cognitive engagement emerged as a significant domain across the reviewed studies, capturing learners' active mental involvement in planning, structuring, and delivering their digital stories. This domain encompasses seven interrelated constructs: theme relevance awareness, scriptwriting, message clarity control, narrative coherence, symbolic coherence, message economy, and the ability to pre-structure content. Collectively, these elements underscore the cognitive demands of DST tasks, requiring learners to think critically, organize information logically, and align their messages with communicative intent.

Several studies have emphasized the cognitively demanding nature of DST tasks, which require learners to engage in goal-oriented thinking and structured language use. For example, González Mesa (2020) found that scriptwriting helped students not only reflect on personal experiences but also align their messages with thematic goals, enhancing their overall message clarity and coherence. Zarei and Navidinia (2024) reported that learners actively revised their content for symbolic coherence and message economy, showing increased awareness of how visual and verbal elements contribute to communicative effectiveness. These findings suggest that DST fosters metacognitive control over language production, encouraging students to make deliberate choices in content organization and expression.

These forms of cognitive investment relate closely to the self-perceived communicative competence layer of the WTC model (MacIntyre et al., 1998). When learners feel they can control and deliver a meaningful message, they are more likely to initiate communication. Engaging students in cognitively rich, task-based activities, DST fosters linguistic production, thereby laying the foundation for greater strategic awareness and improved WTC.

This view echoes Swain's (2000) output hypothesis, which emphasizes that cognitively demanding production tasks promote language development by pushing learners to process language more deeply and with greater accuracy. They also resonate with Robin (2008), who suggested that DST enhances learners' cognitive investment through storyboarding and multimedia planning. However, this review adds new insights by showing that DST's five phases provide cognitive scaffolding that sequentially supports WTC-related behaviors—planning improves topic familiarity and confidence; production fosters ownership; performance enhances fluency and spontaneous speech.

From a teaching perspective, this underscores the value of structured DST task sequences that encourage mental rehearsal, metacognitive control, and authentic application of language. In relation to the WTC model, cognitive engagement contributes to intermediate layers such as perceived communicative competence and readiness to engage, thereby indirectly promoting WTC.

5.1.3. Emotional Facilitation

Emotional facilitation emerged as a meaningful domain in the reviewed studies, capturing the affective dimensions of learners' engagement in DST. This domain comprises three core constructs: emotional engagement, enhancement of expressive confidence, and audience engagement awareness. They highlight how DST can create a personally meaningful, low-risk communicative environment where learners are emotionally invested in their stories, feel more confident in expressing themselves, and remain sensitive to the impact of their message on the audience.

Empirical findings from the reviewed studies support the view that emotional engagement plays a crucial role in shaping learner motivation and WTC. For instance, Humairoh (2023), Fu et al. (2022) and Al-Amri (2020) reported that students demonstrated deeper emotional involvement. Bai and Xian (2024) found that DST reduced speaking anxiety as the multimodal environment supported emotional regulation. Similarly, Zarei and Navidinia (2024) observed that awareness of audience reactions encouraged students to refine their delivery and storytelling techniques, fostering a stronger emotional connection between the speaker and listener.

DST encourages learners to prioritize meaning over accuracy, which aligns with Krashen's (1982) affective filter hypothesis—suggesting that emotionally supportive environments facilitate language acquisition. Moreover, unlike traditional oral tasks, DST allows for repeated practice and editing, which builds learners' emotional safety and risk-taking confidence. The emotional security fostered by DST also aligns with MacIntyre and Gregersen's (2012) findings that positive affect and emotional control are critical prerequisites to increased WTC.

These outcomes correspond to the middle layers of the WTC model, particularly the affective–cognitive interface, such as state confidence and willingness thresholds. For teachers, this highlights the need to design DST tasks that incorporate emotionally relevant topics, empathetic peer feedback, and flexible performance options to maximize communicative readiness.

5.1.4. Collaborative Design

Collaborative design was identified as a salient domain in the reviewed literature, highlighting the social and dialogic nature of DST tasks. This domain includes peer-responsive presentation, audience engagement awareness, and self-correction based on voice feedback. These constructs reflect learners' ability to co-construct meaning, respond to peer input, and iteratively improve their performance through interaction and shared responsibility.

The studies have shown that collaborative elements in DST foster greater learner interaction and reflective revision. For example, Zarei and Navidinia (2024) observed that students became more sensitive to audience expectations and adjusted their presentation style accordingly. They reported that peer voice feedback not only improved narrative clarity but also encouraged self-correction and

confidence building, particularly in speaking tasks. This is further supported by Shen et al. (2024), who observed that learners adjusted their performance based on peer and audience reactions, showing increased audience awareness and collaborative responsibility.

This aligns with sociocultural theories of language learning (Vygotsky, 1978), emphasizing the role of interaction and the zone of proximal development. Collaborative engagement supports the situational antecedents in the WTC pyramid of MacIntyre et al. (1998)—especially desire to communicate with specific interlocutors and perceived group support. These peer-based relational dynamics are essential for building a safe communicative ecology. Pedagogically, structured group roles, peer coaching, and shared reflection in DST should be encouraged to strengthen learners' social motivation for EFL/ESL use.

5.1.5. Multimodal Mediation

Multimodal mediation reflects how learners use multiple semiotic resources to enhance language output and communicative clarity in DST. This domain includes four interrelated constructs: visual-verbal alignment, pronunciation and intonation monitoring, fluency building, and voice feedback. They illustrate how DST supports learners' ability to integrate sound, image, and text in meaningful ways while also gaining greater control over their spoken language delivery.

The reviewed studies have shown that learners benefit from the multimodal nature of DST tasks, particularly in terms of language awareness and oral performance. For example, both Bai and Xian (2024) and Nair and Md Yunus (2022) found that students became more fluent and confident when rehearsing voice-over recordings, enabling them to monitor pronunciation and intonation more effectively. Zarei and Navidinia (2024) also noted that learners paid more attention to the coherence between visuals and spoken narration, which improved both message clarity and audience engagement.

These findings are in line with Mayer's (2005) Cognitive Theory of Multimedia Learning, which asserts that multiple modalities can reduce cognitive load and support dual-channel processing. Hafner (2014) similarly emphasized that DST promotes digital literacies and multimodal communicative competence, DST allows learners to design meaning across visual and auditory modes (Jewitt, 2008). What this review contributes uniquely is a phase-sensitive mapping: visual planning and mode selection primarily occurred during the scripting and production stages, while reflective editing sharpened mode–message alignment in later phases.

In MacIntyre et al.'s (1998) WTC model, multimodal mediation indirectly supports communicative competence and self-perception. Learners may feel more competent when they can supplement spoken English with other semiotic resources. For practitioners, this implies that DST enhances language skills and cultivates transmodal fluency, a key aspect of 21st-century communicative competence.

5.2. Discussion of RQ2: DST-Supported Development of WTC

This study, grounded in the WTC model of MacIntyre et al. (1998), explored how different layers of factors influenced EFL/ESL learners' WTC within the context of DST. Overall, evidence emerged across all six layers; however, DST's distinctive features—such as reduced anxiety and enhanced personalization—were particularly salient in certain layers. For the purpose of analytical clarity, the six-layer structure of MacIntyre et al.'s (1998) WTC model was thematically regrouped into three overarching dimensions: contextual foundations (Layers VI and III), internal readiness (Layers V and IV), and communicative output (Layers II and I). This synthesized structure enables a more coherent mapping of DST-related findings onto the psychological and situational mechanisms underlying WTC.

5.2.1. *Activating Social and Situated Contexts through DST*

This review found that DST plays a significant role in activating socially situated contexts that are conducive to increasing learners' WTC. Many of the included studies emphasized that DST tasks promote group cohesion, peer interaction, and authentic classroom engagement. These elements directly support the situational antecedents identified in MacIntyre et al.'s (1998) WTC model—such as learners' desire to communicate with specific interlocutors and their state communicative confidence. For instance, collaborative scripting and co-filming processes were found to foster relational proximity and mutual support, reducing social anxiety and making learners feel more willing to engage. Compared to individual oral presentations, DST lowers perceived social threat while enhancing learners' social presence. For example, several studies (e.g., De Caro-Barek, 2022; Huang, 2023; Humairoh, 2023; Makarova & Pirozhkova, 2021; Meletiadiou, 2022) reported that DST allowed learners to draw upon personal histories, cultural backgrounds, and social roles, thereby activating their social identities and values. Tasks such as “my hometown story” or “intercultural memory project” positioned learners as meaning-makers, bridging personal experience with communicative purpose. By choosing open-ended topics and multimodal expression, students are able to rethink their identities as cultural agents and storytellers in addition to language learners. It has been demonstrated that this identity repositioning strengthens students' sense of cultural belonging and self-affirmation, especially when they are inspired to consider their background or goals for the future (Garcia-Pastor, 2020). DST helps learners integrate their cultural backgrounds and personal experiences into their digital compositions, making language less of an isolated form and more in line with deeper socio-cultural meaning layers (Hull & Nelson, 2005). This cultural embedding contributes to increased emotional resonance and sustained motivational engagement, both of which are central to the social-individual layer of WTC (MacIntyre et al., 1998). Tasks that encourage learners to express culturally grounded identities have been shown to enhance self-determined motivation and emotional involvement in language use (Ushioda, 2011).

Moreover, DST tasks often require learners to perform for an audience—whether real or imagined—adopt narrative roles, and co-construct stories through group collaboration. These practices further engage learners in authentic meaning-making by reinforcing audience awareness, identity positioning, and collaborative negotiation, all of which are underpinned by learners' past experiences within certain sociocultural settings that influence their communicative performance.

These task designs effectively stimulated learners' communicative engagement by integrating multiple design features that align with situated motivational triggers. Specifically, the tasks provided clearly defined interlocutor expectations, which gave learners a concrete sense of audience and purpose (Huang, 2023); structured timeframes that helped organize their planning and output processes (Al Ghaithi et al., 2023; Humairoh, 2023; Luan et al., 2024; Meletiadiou, 2022; Shen et al., 2024); and emotionally resonant prompts that encouraged personal investment and affective involvement. Together, these elements created conditions conducive to meaningful language use, situating learners' communicative efforts within authentic, socially oriented contexts.

In terms of situated antecedents, DST inherently offers a contextualized communication framework by embedding learners' personal histories, cultural identities, and emotional experiences into narrative tasks. Rather than producing language in a vacuum, students draw upon lived experiences as narrative resources, activating context-specific memories, beliefs, and affective states that shape both content and communicative intent. This aligns with the view that language production is socially and contextually situated (Lantolf & Thorne, 2006), and that learner agency is mediated by prior experiences within culturally meaningful contexts (Norton, 2013).

From a pedagogical perspective, DST can be seen as a contextual scaffold—one that constructs a communicative ecology where learners feel both psychologically and socially prepared to

communicate. It reflects the principle that WTC is not solely an internal disposition but is dynamically shaped by context and interlocutor relationships (Peng, 2012). Teachers can harness this potential by embedding DST in socially meaningful, group-based communicative projects.

5.2.2. Fostering Internal Readiness: Emotional and Motivational Scaffolding in DST

The enhancement of students' WTC can be attributed to the emotional and motivational scaffolding provided by DST, with enjoyment, creativity, and personal relevance serving as critical affective triggers. In particular, the results of this study demonstrate how DST increase learners' WTC through two interrelated mechanisms: affective-cognitive context (Layer V) and motivational propensities (Layer IV).

This review reveals a consistent pattern across multiple studies demonstrating the affective benefits of DST and related multimodal practices. For instance, studies of Bai and Xian (2024), Fan (2024), Luan et al. (2024), Meletiadou (2022) and Al-Amri (2020) reported noticeable reductions in anxiety or fear, while studies of Makarova and Pirozhkova (2021), Shen et al. (2024) specifically noted decreased shyness among learners. Additional evidence from studies of Fu et al. (2022), Nair and Md Yunus (2022), Shen et al. (2024) indicates that hesitation, a common behavioral manifestation of affective barriers, was alleviated through tools such as Toontastic scaffolding and DST-based transmediation. These findings suggest that emotionally supportive learning environments may help ease learners' negative perceptions of language acquisition (e.g., De Caro-Barek, 2022), especially among those with lower confidence.

Studies included in this review showed that DST lowers anxiety by allowing for message-focused rehearsal, repeated practice, and creative self-expression. At the same time, the personal and cultural relevance of DST tasks strengthens learners' motivation to communicate. These observations align with Krashen's (1982) affective filter hypothesis and with MacIntyre et al.'s (1998) assertion that reducing anxiety and increasing self-confidence can significantly raise WTC.

In contrast to traditional classroom settings, DST offers sustained emotional support—characterized by continuous engagement rather than transient excitement (Robin, 2008)—which facilitates the consolidation of learners' behavioral intention (Yashima, 2002). The affective dimension of motivation is particularly crucial for students who initially lack confidence. As Dewaele and MacIntyre (2014) noted, positive emotions play a critical role in foreign language learning by reducing anxiety and enhancing learners' WTC. Similarly, Peng (2019) emphasized that multimodal classroom affordances can emotionally support learners, especially those with low confidence, by creating more engaging and supportive interactional spaces.

Importantly, this review demonstrates that the DST process itself functions as a scaffold—each phase, from planning to performance, builds emotional momentum. For example, successful scripting builds ownership, while editing and reflection increase learners' sense of control. In doing so, DST nurtures the psychological prerequisites for communication, helping learners become more willing and better prepared to communicate when the opportunity arises.

5.2.3. From Willingness to Words: Realizing Communicative Action through DST

While intention to communicate marks an important psychological threshold, the realization of WTC ultimately depends on learners' ability and willingness to engage in actual communicative behavior (MacIntyre et al., 1998). At the behavioral level, DST serves as a bridge between internal willingness and actual communicative action. Several studies reported that learners who engaged in DST activities showed increased output in terms of oral narration, self-initiated speech, and extended peer interaction. This corresponds to Layer I of the WTC pyramid: the initiation of real communication behavior.

Several studies (e.g., Bai & Xian, 2024; Fan, 2024; Fu et al., 2022; Huang, 2023; Nair & Md Yunus, 2022; Shen et al., 2024) reported that DST tasks led to increased verbal output, particularly through story presentations, video narration, and group storytelling performances. The narrative structure of DST—typically comprising a beginning, conflict, resolution, and personal voice—encouraged learners to organize their ideas more coherently and express them with greater fluency and confidence (Fu et al., 2022; Hava, 2021). Unlike traditional speaking drills that often emphasize mechanical repetition, DST positions learners as creative agents and purposeful communicators, offering them both a reason to communicate and an authentic audience to communicate with. Several studies confirmed that learners engaged in DST took ownership of their stories (Humairoh, 2023), felt more motivated to speak (Zarei & Navidinia, 2024), and delivered their work to real or peer audiences (Fan, 2024; Huang, 2023), thereby enhancing both communicative intention and performance.

The semi-scripted and multimodal nature of DST may also reduce the psychological barrier between intention and expression (Bai & Xian, 2024; Fu et al., 2022; Huang, 2023; Zarei & Navidinia, 2024). Learners often rehearse, revise, and perform their stories in groups, a process that not only scaffolds oral production but also reduces the fear of failing during spontaneous speaking. Across several studies, DST was implemented through collaborative scripting, iterative feedback, and multiple rounds of rehearsal, creating a low-pressure environment that mitigated performance anxiety (Fan, 2024; Luan et al., 2024; Peña-Acuña & Navarro-Martínez, 2024; Shen et al., 2024). As reported in research of Fu et al. (2022), Nair and Md Yunus (2022), Shen et al. (2024), students who were typically hesitant to speak became more engaged when communication was repositioned as a form of creative expression rather than a formal oral assessment.

What distinguishes DST is its capacity to operationalize WTC through semi-rehearsed yet authentic language use. Unlike spontaneous in-class speaking, DST allows learners to carefully craft and record their narratives, which increases their willingness to “take the leap” into communication. As Sylvester and Greenidge (2009) argue, storytelling gives structure and personal significance to language use—both critical for eliciting actual output.

In this sense, DST transforms WTC from an intention into a behavior, offering a low-risk, high-engagement platform for communicating practice. Learners do not merely become “willing” but actually experience communication in meaningful, multimodal, and expressive ways. This is particularly important for EFL/ESL learners whose oral fluency development often lags behind receptive skills. DST therefore functions as a communicative accelerator in WTC development.

In summary, this review reveals that DST supports WTC development at multiple levels of MacIntyre et al.’s (1998) model—from shaping social contexts, to scaffolding emotional and motivational readiness, and finally to facilitating real communicative acts. By analyzing DST through a phase-based lens and mapping its influence across WTC layers, this review offers a nuanced framework for how multimodal DST tasks can be integrated into EFL/ESL instruction to foster holistic communicative growth.

6. Conclusion

This systematic review examined how DST supports EFL/ESL learners’ WTC by synthesizing findings through a dual framework: Ohler’s (2013) five-phase DST model and MacIntyre et al.’s (1998) WTC pyramid model.

In response to RQ1, five core domains emerged from the analysis—identity-centered expression, cognitive engagement, emotional facilitation, collaborative design, and multimodal mediation—each representing key learner developments fostered across DST phases.

For RQ2, these domains were mapped onto the layered structure of WTC, illustrating how DST reduces affective barriers (Layers VI and III), strengthens communicative competence and self-

confidence (Layers V and IV), and facilitates the transition from intention to actual EFL/ESL use (Layers I–II). In particular, emotional safety, peer support, narrative ownership, and creative control emerged as key mediating factors between DST tasks and WTC outcomes.

These findings suggest that WTC should not be viewed merely as a stable psychological trait, but as an emergent, teachable disposition shaped by meaningful, multimodal, and collaborative learning contexts. DST, when purposefully integrated, enables learners to develop their communicative voice and agency through low-risk, identity-affirming expression.

Pedagogically, the review recommends designing DST as a holistic instructional ecology, not just a storytelling technique. Teachers are urged to construct learning environments that encourage personal narration, risk-taking, and multimodal exploration.

Future studies could adopt longitudinal classroom-based approaches to explore how DST tasks impact learner WTC development over time, with specific attention to digital literacy, task design, and individual learner differences.

7. Suggestion

This review is subject to several limitations. First, it focused only on two databases— Scopus and Web of Science—which may have excluded relevant studies from other sources. Second, the review covered only the past five years, potentially overlooking earlier but important contributions. Third, only empirical studies were included, leaving out theoretical discussions that could have enriched the conceptual framing. Future research could broaden the database selection, extend the time range, and include theoretical works to build a more comprehensive understanding of how DST fosters WTC in EFL/ESL contexts.

Declarations

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