

TPS-Webbed Inclusive Learning Model: An Integrated Pedagogical Innovation for Enhancing 21st-Century Competencies among Elementary School Students with Disabilities

Novi Nitya Santi ^{1 a}, Kurniawan Wahyu Pratama ^{*1 b}

¹ Elementary School Teacher Education Study Program (PGSD), Faculty of Teacher Training and Education, Universitas Nusantara PGRI Kediri, Jl. KH. Achmad Dahlan No. 76, Kediri 64112, East Java, Indonesia

^a novinitya@gmail.com; ^b kwahyupratama1@gmail.com *

* Corresponding Author

Abstract: Inclusive education in elementary schools requires pedagogical innovations that accommodate learner diversity while enabling meaningful participation and the development of competencies needed in the twenty-first century. This conceptual study proposes the TPS-Webbed Inclusive Learning Model, which integrates Think Pair Share (TPS), the Webbed thematic approach, and inclusive pedagogy. The model is intended primarily for inclusive elementary classrooms serving students with disabilities who can participate in shared classroom activities with individualized supports, including students with mild intellectual disabilities, specific learning difficulties, communication and language needs, hearing or visual impairments, physical disabilities, and other access needs. An integrative literature review and conceptual synthesis were conducted using a documented search and screening procedure. Searches were designed around four concept clusters: inclusive education/disability, cooperative learning/TPS, thematic-integrated/Webbed learning, and twenty-first-century competencies/4Cs. Sources were screened for conceptual relevance, peer-reviewed or authoritative status, educational context, and contribution to model construction. The resulting model specifies six phases; Thematic Orientation, Think, Pair, Share, Collaborative Elaboration, and Reflection and Inclusive Assessment, and embeds accessibility supports, assistive technology options, multimodal communication, and alternative response modes throughout the sequence. The model also defines observable indicators for critical thinking, communication, collaboration, and creativity and proposes inclusive assessment criteria emphasizing progress, participation, access, and quality of performance rather than a single response mode. Because the model has not yet undergone expert validation or classroom testing, its expected effects are presented as theoretical propositions rather than demonstrated effectiveness. The contribution of the model is therefore conceptual: it combines thematic curriculum organization with structured peer interaction and disability-responsive access within one instructional architecture.

Keywords: TPS-Webbed Inclusive Learning Model; Inclusive Education; Students with Disabilities; 21st-Century Competencies; Elementary School

INTRODUCTION

The rapid transformation of society in the twenty-first century has significantly reshaped the role of education. Schools are no longer expected merely to transmit knowledge; rather, they are required to prepare learners to navigate increasingly complex social, technological, and global challenges. Consequently, educational systems worldwide have shifted their focus toward developing competencies that enable learners to think critically, communicate effectively, collaborate productively, and generate creative solutions to real-world problems. These competencies, commonly known as the 4Cs, have become central indicators of educational quality and learner readiness in contemporary society (Voogt & Roblin, 2021). Within this context, the development of twenty-first-century competencies should not be limited to typically developing learners but must also encompass students with disabilities, who possess equal rights to meaningful participation and quality educational opportunities.

The commitment to equitable education has been strengthened through Sustainable Development Goals 4 (SDGs 4), which emphasizes inclusive and equitable quality education for all learners regardless of their backgrounds and abilities (United Nations, 2023). Internationally, inclusive education has evolved beyond the notion of merely placing students with disabilities in regular classrooms. Instead, inclusion is increasingly understood as the creation of learning environments that actively recognize learner diversity, support meaningful participation, and ensure equitable learning outcomes (UNESCO,

2020). This perspective positions inclusive education not only as a matter of access but also as a pedagogical responsibility requiring schools and teachers to design learning experiences that accommodate diverse learning characteristics.

In Indonesia, the implementation of inclusive education has gained increasing attention through various educational policies and regulations that guarantee the educational rights of students with disabilities. The enactment of Law Number 8 of 2016 concerning Persons with Disabilities and the continued expansion of inclusive schools demonstrate the government's commitment to educational equity. Nevertheless, the successful implementation of inclusive education remains a considerable challenge, particularly at the elementary school level. Several studies have reported that many inclusive classrooms still encounter difficulties related to instructional adaptation, teacher preparedness, learning support services, and the meaningful participation of students with disabilities in classroom activities (Ainscow, 2020; Florian & Black-Hawkins, 2019).

These challenges become even more significant when viewed from the perspective of twenty-first-century learning. While students are expected to develop higher-order thinking skills, communication abilities, collaboration competencies, and creativity, many classroom practices continue to be dominated by teacher-centered instruction and content-oriented learning. Such approaches often limit students' opportunities to engage actively in constructing knowledge, interacting with peers, and solving authentic problems. For students with disabilities, these limitations may lead to reduced participation, lower engagement, and fewer opportunities to develop both academic and socio-emotional competencies. As emphasized by UNESCO (2020), educational inclusion should not only provide access to learning but also ensure active participation and achievement for all learners.

The challenge of fostering meaningful participation among students with disabilities has attracted increasing attention from scholars in educational psychology and inclusive pedagogy. Florian (2019) argues that effective inclusive education requires teaching approaches that expand learning opportunities for all students rather than creating separate instructional pathways for particular groups. Similarly, Sharma et al. (2022) emphasize that inclusive classrooms should promote learner engagement, collaboration, and shared learning experiences that support both academic and social development. These perspectives suggest that the effectiveness of inclusive education depends not solely on curriculum adaptation but also on the pedagogical models employed in the classroom.

One pedagogical approach that has demonstrated considerable potential in promoting active engagement is cooperative learning. Rooted in social constructivist theory, cooperative learning emphasizes knowledge construction through interaction, dialogue, and shared responsibility among learners (Johnson, 2019). Numerous studies have documented the positive effects of cooperative learning on academic achievement, social interaction, communication skills, and learner motivation (Slavin, 2020). For students with disabilities, cooperative learning offers valuable opportunities to participate in peer-mediated learning experiences that foster both cognitive and social growth.

Among various cooperative learning models, Think Pair Share (TPS) has received substantial attention due to its simplicity and adaptability. Originally developed by Lyman, TPS consists of three sequential stages: thinking individually about a problem, discussing ideas with a partner, and sharing conclusions with a larger group. This structure encourages every learner to contribute, reduces participation anxiety, and creates opportunities for collaborative knowledge construction. Previous research has demonstrated that TPS can improve critical thinking, communication skills, classroom interaction, and learning engagement across various educational contexts (Johnson, 2019; Slavin, 2020).

However, despite its strengths, TPS primarily functions as an interactional learning strategy. The model focuses on how learners engage with ideas and peers but does not explicitly address how learning content is organized and integrated across disciplines. This limitation is particularly relevant in elementary education, where learning is expected to be holistic, contextual, and interconnected. Elementary school students, especially those with disabilities, often learn more effectively when concepts are presented through meaningful themes that connect multiple subject areas and relate directly to their daily experiences.

In response to this need, thematic-integrated learning has become a prominent instructional approach in elementary education. One of the most widely recognized thematic models is the Webbed

approach introduced by Fogarty. In this model, a central theme serves as an organizing framework that connects concepts and competencies across different subjects. Through thematic integration, learners are encouraged to develop holistic understanding, recognize relationships among concepts, and apply knowledge within authentic contexts. Research has shown that thematic learning contributes positively to learner engagement, conceptual understanding, and meaningful learning experiences, particularly in elementary school settings (Drake & Reid, 2020).

The relevance of thematic learning extends beyond academic integration. From an inclusive education perspective, thematic instruction provides flexible opportunities for learners with diverse abilities to access content through multiple pathways and learning experiences. Contextual themes allow students with disabilities to connect new knowledge with prior experiences, thereby facilitating understanding and participation. Consequently, thematic learning aligns closely with the principles of inclusive pedagogy, which advocate for accessible and meaningful learning opportunities for all learners.

Although cooperative learning and thematic-integrated learning have each demonstrated considerable educational benefits, existing studies generally examine them as separate instructional approaches. Research on TPS has predominantly focused on improving academic achievement, classroom participation, communication skills, and collaborative learning. Similarly, studies on Webbed learning have largely emphasized thematic integration, curriculum implementation, and meaningful learning experiences in elementary education. While both approaches share a learner-centered orientation, limited attention has been devoted to integrating their complementary strengths within a unified instructional framework designed specifically for students with disabilities.

The need for such integration becomes increasingly evident when considering recent developments in elementary education research. A study conducted by Nityasanti et al. (2023) demonstrated that educational interventions aimed at elementary school students should simultaneously strengthen academic competence and socio-personal competence. Their findings indicate that effective learning models must not only improve cognitive outcomes but also foster communication, responsibility, collaboration, and positive social interactions among learners. These findings are highly relevant to contemporary inclusive education, where academic development and socio-emotional growth are viewed as equally important dimensions of learner success.

Similarly, research conducted by Pratama et al. (2022) highlighted the importance of learner motivation, social affiliation, and active participation in elementary education. Their study, grounded in McClelland's motivation theory, found that learners' needs for affiliation and social interaction play a significant role in shaping learning engagement and motivation. This insight suggests that instructional models should provide structured opportunities for interaction, collaboration, and meaningful participation, particularly for learners who may experience barriers to engagement, such as students with disabilities.

Taken together, these studies indicate that effective elementary education should simultaneously address academic, social, motivational, and participatory dimensions of learning. However, a review of the literature reveals that there remains a limited number of studies proposing an integrated pedagogical model that combines cooperative interaction, thematic learning, inclusive pedagogy, and twenty-first-century competency development within a single conceptual framework. Most existing studies investigate these components independently, resulting in fragmented approaches that may not fully address the complex learning needs of students with disabilities.

This gap highlights an important opportunity for theoretical innovation. Rather than treating cooperative learning, thematic instruction, and inclusive education as separate pedagogical domains, there is a need to synthesize their complementary strengths into a coherent instructional framework capable of supporting both participation and competency development. Such a framework is particularly relevant in elementary schools, where learners require structured social interaction, contextualized learning experiences, and differentiated opportunities for engagement.

In response to this challenge, the present study proposes the TPS-Webbed Inclusive Learning Model, an integrated pedagogical innovation that combines the interactional structure of Think Pair Share with the thematic organization of the Webbed approach within an inclusive education framework. In this model, TPS functions as the instructional syntax that facilitates learner engagement,

collaboration, and communication, while Webbed serves as the thematic architecture that connects learning experiences across subject areas. The integration of these two approaches is intended to create a learning environment that is participatory, contextual, accessible, and responsive to the diverse needs of elementary school students with disabilities.

The scientific novelty of this study lies in the development of a conceptual model that systematically integrates four educational dimensions: cooperative learning, thematic-integrated instruction, inclusive pedagogy, and twenty-first-century competency development. Unlike previous studies that have examined these dimensions separately, the TPS-Webbed Inclusive Learning Model offers a unified framework specifically designed to strengthen critical thinking, communication, collaboration, and creativity among students with disabilities in elementary education settings.

Therefore, this study aims to develop and theoretically formulate the TPS-Webbed Inclusive Learning Model as an integrated pedagogical innovation for enhancing twenty-first-century competencies among elementary school students with disabilities. Specifically, the study seeks to explore the model's conceptual foundations, instructional characteristics, and potential contributions to inclusive educational practices. Furthermore, the study addresses the following research question: **How can the integration of Think Pair Share and Webbed learning approaches contribute to the development of an inclusive pedagogical model that strengthens twenty-first-century competencies among elementary school students with disabilities?**

METHODS

Research Design

This study employed a conceptual research design using an integrative literature review and conceptual model development approach. Conceptual research is appropriate when the purpose is to synthesize existing theoretical knowledge, identify relationships among constructs, and formulate a framework that can subsequently be examined empirically (Jaakkola, 2020). The study does not claim to establish intervention effectiveness; its output is a theoretically reasoned instructional model.

Search Strategy and Information Sources

To respond to the need for transparent literature selection, the review was organized around four concept clusters: (1) inclusive education and disability; (2) cooperative learning and Think Pair Share; (3) thematic-integrated and Webbed learning; and (4) twenty-first-century competencies, particularly the 4Cs. Searches were conducted using combinations of controlled and free-text terms. The core search string was: ("inclusive education" OR "inclusive pedagogy" OR "students with disabilities" OR "learners with disabilities") AND ("cooperative learning" OR "Think Pair Share" OR TPS) AND ("thematic learning" OR "integrated curriculum" OR Webbed) AND ("21st-century competencies" OR "21st-century skills" OR "critical thinking" OR communication OR collaboration OR creativity).

Additional focused searches were conducted for each cluster when the combined string produced either excessive noise or insufficient coverage. The intended databases and scholarly sources were Scopus, Web of Science, ERIC, SpringerLink, Taylor & Francis, ScienceDirect, Google Scholar, and accredited Indonesian journals indexed in SINTA. Books, policy documents, and reports from authoritative organizations were considered when they supplied foundational definitions or policy frameworks.

Screening and Selection Procedure

The screening procedure comprised four stages. First, records were identified through database and supplementary searches. Second, titles and abstracts were screened for direct relevance to at least one core construct. Third, potentially relevant full texts were assessed for conceptual contribution to inclusive pedagogy, cooperative interaction, thematic integration, disability-responsive access, or twenty-first-century competency development. Fourth, the retained literature was synthesized into theoretical constructs, design requirements, instructional phases, and assessment indicators.

Sources were prioritized when they were peer-reviewed or issued by an authoritative organization; directly addressed the target constructs; provided a theoretical, empirical, or policy basis for the model;

and contained sufficient bibliographic information for traceability. Duplicates, publications without a substantive connection to the model, and sources whose claims could not support the conceptual argument were excluded. Because the present article was designed as an integrative conceptual review rather than a systematic review with meta-analysis, no effect-size synthesis was performed.

For transparency, the screening logic should be reported in the final journal submission using the actual database retrieval counts available to the authors. The present manuscript specifies the search string and decision rules but does not fabricate numerical counts that were not recorded during the original search.

Analytical Synthesis and Theoretical Triangulation

The retained literature was analyzed in three steps. First, theoretical constructs were extracted concerning inclusive pedagogy, cooperative learning, thematic integration, accessibility, and twenty-first-century competencies. Second, complementarities and limitations among existing approaches were compared. Third, the constructs were translated into model components: target learners, accessibility principles, instructional phases, teacher actions, learner responses, assistive supports, and observable 4C indicators. The emerging framework was then examined through theoretical triangulation using social constructivism, cooperative learning theory, inclusive pedagogy, and twenty-first-century learning frameworks.

RESULTS AND DISCUSSION

1. Target Learners and Disability-Responsive Design Principles

The model is intended for inclusive elementary classrooms in which students with disabilities participate in common learning activities with peers. The intended population is heterogeneous and includes, as examples, students with mild intellectual disabilities, specific learning difficulties, communication and language needs, hearing impairments, visual impairments, physical disabilities, and other conditions that affect access to classroom communication or learning materials. The model is not a clinical intervention and should not be interpreted as suitable without modification for every learner or disability profile.

The design follows a 'common goal, flexible pathway' principle. Teachers maintain shared thematic learning objectives where appropriate, but adjust representation, interaction, action, expression, pacing, and assessment according to documented learner needs. Accessibility is therefore treated as an instructional property rather than an additional activity for selected students. Supports may include simplified or chunked instructions, visual schedules, captions, sign-supported communication, Braille or tactile materials, screen readers, enlarged text, alternative keyboards or switches, communication boards, speech-generating devices, peer-mediated support, additional processing time, and alternative response formats.

The model also adopts a least-restrictive and non-stigmatizing orientation. Supports should be available to learners who need them without unnecessarily separating students with disabilities from their peers. Teachers are expected to coordinate adaptations with individualized educational plans or school support teams where such structures exist and to avoid assuming that a diagnostic label alone determines a student's instructional need.

2. Theoretical Foundations

The model draws on four complementary foundations. Social constructivism explains learning through interaction and socially mediated meaning making. Cooperative learning explains the value of positive interdependence, individual accountability, and structured interaction. Inclusive pedagogy emphasizes expanding learning opportunities for all rather than constructing separate curricula for particular groups (Florian, 2019). Twenty-first-century learning frameworks identify critical thinking, communication, collaboration, and creativity as important contemporary competencies. The contribution of the present model is to operationalize the interaction among these foundations within a single thematic and accessibility-aware sequence.

3. Systematic Comparison with Related Integrated Frameworks

The model differs from related approaches primarily in the level at which integration is specified. Webbed learning provides a macro-level thematic organization, whereas TPS provides a micro-level interaction sequence. Universal Design for Learning (UDL) offers broad principles for multiple means of engagement, representation, and action/expression, but does not prescribe the specific TPS-Webbed sequence. Inclusive pedagogy provides a philosophy and teaching orientation centered on learning for all, but does not by itself determine how thematic content and peer interaction should be sequenced. Conventional TPS provides structured peer interaction but does not explicitly specify cross-subject thematic architecture or disability-responsive accessibility. The TPS-Webbed model therefore proposes a combined architecture in which thematic organization, peer interaction, accessibility, and 4C assessment are explicitly connected.

Table 1. Summarizes this distinction

Framework	Primary organizing function	Accessibility specification	Interaction sequence	Distinctive relation to TPS-Webbed
Webbed thematic learning	Macro-level thematic integration across subjects	Flexible but not inherently disability-specific	Not prescribed	Supplies the thematic architecture adopted by TPS-Webbed
Think Pair Share	Micro-level cooperative interaction	Can be adapted, but supports are not intrinsically specified	Think–Pair–Share	Supplies the core interactional syntax
UDL	Multiple means of engagement, representation, action/expression	Explicit and broad	Not a fixed interaction sequence	Provides accessibility principles that can strengthen implementation
Inclusive pedagogy	Participation and learning opportunities for all	Learner-responsive	Not a fixed sequence	Provides the inclusive pedagogical orientation
TPS-Webbed Inclusive Learning Model	Thematic + cooperative + inclusive architecture	Explicit phase-by-phase supports and alternative response modes	Six phases	Combines the four dimensions in one conceptual instructional framework

4. Conceptual Structure of the TPS-Webbed Inclusive Learning Model

In the proposed architecture, Webbed functions as the macro-level organizer, TPS provides the core interactional sequence, inclusive pedagogy operates as a cross-cutting accessibility layer, and 4C indicators constitute the competency outcome layer. This structure prevents accessibility from being treated as an isolated accommodation and instead embeds access into planning, interaction, expression, collaboration, and assessment.

5. Instructional Syntax and Disability-Responsive Accessibility

Table 2. Syntax TPS-Webbed Inclusive Learning Model

Phase	Core activity	Teacher accessibility supports	Assistive / communication options	Alternative learner responses	Primary 4C emphasis
Thematic Orientation	Introduce a meaningful central theme and connect it to prior experience.	Use short, sequenced instructions; visual schedule; concrete objects; preview vocabulary; check understanding.	Captioned video, visual symbols, tactile objects, enlarged/Braille text, screen reader-compatible materials.	Pointing, selecting symbols, gesture, drawing, oral/written response, AAC.	Critical thinking; communication
Think	Learners independently observe,	Allow additional processing time; reduce	Text-to-speech, speech-to-text, AAC,	Writing, typing, drawing, voice recording,	Critical thinking

	analyze, or formulate an initial response.	irrelevant information; provide graphic organizers or worked examples when needed.	adapted pencil/grip, digital organizer.	symbol selection, AAC.	
Pair	Learners exchange ideas with a partner.	Strategic pairing; explicit turn-taking; sentence starters; peer communication rules; quiet rehearsal option.	Hearing support, captions, sign language/interpreter as available, AAC, visual conversation cards.	Speech, sign, AAC, pointing, written notes, shared digital board.	Communication; collaboration
Share	Pairs communicate their ideas to a group or class.	Offer rehearsal; permit co-presentation; avoid requiring one public speaking mode for all learners.	Microphone, captions, projected text/images, AAC, recorded presentation.	Oral presentation, signed presentation, poster, video, audio, digital slide, demonstration.	Communication; collaboration
Collaborative Elaboration	Groups develop a solution, product, or project related to the theme.	Assign flexible roles; make contribution visible; scaffold task steps; ensure physical and digital access.	Accessible collaborative documents, switches, adapted tools, screen readers, visual timers.	Model/product, drawing, construction, digital artifact, written plan, oral explanation, AAC.	Creativity; collaboration; critical thinking
Reflection and Inclusive Assessment	Learners reflect and teachers assess progress and participation.	Use individualized success criteria; assess process and product; provide alternative formats; document supports used.	Self-rating symbols, digital forms, audio reflection, AAC, tactile/visual scales.	Written reflection, oral response, drawing, symbol scale, video/audio, demonstration.	Critical thinking; communication; integrated 4Cs

6. Observable 4C Indicators and Inclusive Assessment Criteria

The relationship between instructional phases and 4C development should be treated as a theoretical proposition that becomes testable through observable indicators. The indicators below are not intended as a universal psychometric scale; they are design-oriented criteria for classroom observation and future validation.

Table 3. Competency 4Cs

Competency	Observable indicators	Inclusive evidence options	Suggested criterion
Critical thinking	Identifies relevant information; distinguishes facts/ideas; gives a reason for a choice; compares alternatives; revises a response after feedback.	Written answer, oral explanation, drawing/diagram, pointing/selection, AAC, demonstration.	Evidence shows reasoning appropriate to the task, with the learner's permitted access mode and support documented.
Communication	Expresses an idea clearly; responds to a partner; asks/answers a relevant question; uses an understandable communication mode; adjusts message to audience.	Speech, sign, AAC, writing, symbols, visual presentation, recorded audio/video.	Message is intelligible and relevant; communication support is treated as an access tool rather than a deficit.

Collaboration	Takes a role; waits/turns appropriately; shares materials/information; responds to peers; contributes to a joint product.	Direct observation, peer product, role record, collaborative digital artifact.	Learner makes a meaningful contribution and participates in reciprocal interaction, with reasonable supports.
Creativity	Generates more than one possible idea; combines ideas/materials; proposes an original or useful solution; modifies a product.	Prototype, drawing, model, digital artifact, oral/signed explanation, performance.	Product/process demonstrates novelty, flexibility, or purposeful adaptation relative to the task.

Inclusive assessment should be criterion-referenced rather than norm-referenced. Four dimensions are recommended: (1) achievement of the intended competency indicator; (2) quality and relevance of the learner's contribution; (3) participation and independence relative to the learner's starting point; and (4) accessibility of the assessment process. Teachers should not lower the construct being assessed merely because a learner uses an alternative response mode. For example, critical thinking may be demonstrated through AAC, drawing, or oral explanation when the construct is reasoning rather than handwriting.

A practical four-level rubric can be used for future validation. Level 1 emerging, where the learner demonstrates the indicator with substantial prompting; Level 2 developing, where the learner demonstrates the indicator with occasional support; Level 3 proficient, where the learner demonstrates the indicator independently or with routine access supports; Level 4 advanced, where the learner demonstrates the indicator consistently and transfers it to a new or more complex context. These levels should be adapted and empirically validated before being used for high-stakes decisions.

7. Novelty and Scientific Contribution

The novelty of the model should be stated cautiously. It does not claim that TPS, Webbed learning, inclusive pedagogy, accessibility supports, or the 4Cs are individually new. Rather, the proposed contribution is the conceptual configuration that assigns distinct functions to each component and specifies their integration at classroom level. Webbed supplies the thematic architecture; TPS supplies the interactional syntax; inclusive pedagogy supplies the participation and accessibility orientation; and the 4C layer supplies observable competency targets. The additional contribution is the phase-by-phase mapping of disability-responsive supports and alternative response modes.

This formulation distinguishes the model from approaches that remain primarily thematic, interactional, or principle-based. It also creates a clearer route for empirical testing because the model's constructs can be operationalized through observable teacher actions, learner responses, accessibility supports, and competency indicators.

8. Theoretical Propositions and Limits of the Model

Because the model has not yet been validated by experts or tested in authentic classrooms, statements about effectiveness must remain propositional. Proposition 1: embedding accessible individual thinking time before peer interaction may increase opportunities for students with diverse communication and processing needs to formulate and express ideas. Proposition 2: combining structured peer interaction with thematic contexts may create more opportunities for meaningful collaborative participation than either component used in isolation. Proposition 3: offering multiple response modes may allow learners to demonstrate 4C-related competence without confounding the target construct with a single communication or motor demand. Proposition 4: inclusive assessment that documents learner progress and access supports may provide a fairer representation of competence than assessment requiring one standardized response mode.

These propositions require expert review, feasibility studies, classroom observation, and preferably quasi-experimental or mixed-methods research before claims of effectiveness can be made. Future validation should examine content validity, usability, fidelity of implementation, inter-rater agreement for 4C indicators, learner participation, academic outcomes, social interaction, and differential accessibility across disability profiles.

CONCLUSION

The TPS-Webbed Inclusive Learning Model is proposed as a theoretically integrated framework for inclusive elementary education. It combines the thematic architecture of Webbed learning, the interactional sequence of Think Pair Share, the principles of inclusive pedagogy, and observable 4C-oriented assessment criteria. The model is intended for heterogeneous inclusive classrooms and therefore treats accessibility as a cross-cutting design requirement rather than a separate accommodation.

The revised framework responds to the principal conceptual weaknesses identified in the original formulation by documenting the search strategy and screening logic, specifying intended learner profiles, embedding disability-responsive supports in each instructional phase, detailing communication and assistive technology options, comparing the model with related frameworks, and defining observable indicators for critical thinking, communication, collaboration, and creativity. Nevertheless, these specifications remain theoretical until subjected to expert validation and empirical testing.

Accordingly, the TPS-Webbed Inclusive Learning Model should be interpreted as a testable conceptual proposition rather than a validated intervention. Its future scientific value will depend on whether systematic validation demonstrates that the proposed integration is feasible, accessible, instructionally coherent, and associated with meaningful improvements in participation and competency development across diverse learners.

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