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Theories and Models of Creativity to Support Special Needs Education: A Systematic Review

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ABSTRACT

This systematic review examines creativity theories and models and their relevance to special needs education. The review synthesizes foundational and contemporary frameworks, including Wallas's Four-Stage Model, the Four-C Model, Csikszentmihalyi's Systems Model, Piirto's Pyramid of Talent Development, Amabile's Componential Model, Sternberg's Investment Theory, and the Triangular Theory of Creativity. The findings show that earlier models tend to emphasize individual cognitive processes, while contemporary models highlight socio-cultural, environmental, and collaborative factors in creative development. The review also identifies definitional ambiguity as a challenge in adapting creativity models to inclusive contexts. Integrative and flexible approaches are recommended to support creative potential among learners with diverse abilities.

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1. INTRODUCTION

Creativity is a multifaceted construct that plays an important role in human development, problem-solving, innovation, and learning. It has been discussed across psychology, cognitive science, philosophy, education, and engineering, reflecting its broad relevance to both individual growth and social progress (Moruzzi, 2020; Childs et al., 2022).

In education, creativity supports students' ability to generate ideas, adapt to challenges, and express understanding in flexible ways. This is especially important in special needs education, where learners may require alternative pathways to demonstrate ability, participate meaningfully, and develop their potential.

The study of creativity has developed from early views of creativity as divine inspiration or individual genius into more complex perspectives involving cognitive, affective, social, cultural, and environmental factors. Psychoanalytic, humanistic, and cognitive perspectives each explain creativity differently. Psychoanalytic views connect creativity with inner psychological processes, humanistic views emphasize self-actualization and personal growth, and cognitive views focus on divergent thinking, problem-solving, and knowledge restructuring (Gaut, 2010; Wadaani, 2015; Luria et al., 2016; Fontecha, 2021). These perspectives show that creativity cannot be understood through a single dimension. Despite growing attention, creativity remains difficult to define. Scholars have proposed many definitions, but there is still no universally accepted framework for explaining creativity across contexts and populations (Hughes et al., 2018; Reddy et al., 2018). However, many definitions emphasize originality, usefulness, effectiveness, and contextual appropriateness as central features of creative output (Jung et al., 2009; Fink et al., 2008; Witczak et al., 2024). This definitional complexity becomes more important in special needs education because students with diverse abilities may express creativity in ways that differ from conventional academic or performance-based expectations.

Several models have been developed to explain the creative process and creative development. Foundational models such as Wallas's Four-Stage Model focus on stages of creative thought, while later models such as the Four-C Model, Systems Model, Componential Model, Investment Theory, and Triangular Theory highlight developmental levels, domain knowledge, motivation, environment, social validation, and cultural context. These models provide useful insights, but many were originally developed for general populations or gifted education contexts. Therefore, their relevance to learners with special educational needs requires careful review and adaptation.

This systematic review examines major theories and models of creativity and analyzes their implications for special needs education. The review aims to synthesize how creativity is conceptualized, what factors support creative development, and how existing models may inform inclusive curriculum design, teacher preparation, and classroom interventions. By reviewing both foundational and contemporary frameworks, this paper seeks to identify flexible and integrative approaches for supporting the creative potential of learners with diverse abilities.

2. METHODS

This study used a systematic review design to examine creativity theories and models and their relevance to special needs education. The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure transparency,

consistency, and rigor in the selection and synthesis of sources. A literature search was conducted in major academic databases, including PsycINFO, Scopus, Web of Science, and ERIC. The search used keywords such as “creativity models,” “theories of creativity,” “creativity frameworks,” “components of creativity,” “creativity definitions,” “creativity assessment,” “special needs education,” and “inclusive education.” Additional relevant literature was also considered to strengthen the review and compare the selected models with recent discussions on creativity research (Széll, 2021). The inclusion criteria covered peer-reviewed journal articles, dissertations, and scholarly books written in English. No publication year restriction was applied because the review included both foundational and contemporary creativity models. Priority was given to studies that discussed theoretical frameworks of creativity, creativity development, creativity assessment, gifted education, inclusive education, and special needs education. The selected sources were analyzed based on their theoretical foundations, key components, strengths, limitations, and relevance to learners with diverse abilities. The review focused on major models, including Wallas’s Four-Stage Model, the Four-C Model, Csikszentmihalyi’s Systems Model, Piirto’s Pyramid of Talent Development, Amabile’s Componential Model, Sternberg’s Investment Theory, and the Triangular Theory of Creativity. Data were synthesized thematically to identify similarities, differences, and gaps among the models. The synthesis emphasized how creativity is defined, how creative development is supported, and how each model may be adapted to special needs education. The analysis also considered whether the models addressed individual cognitive processes, socio-cultural influences, environmental support, collaboration, motivation, and inclusive classroom application.

3. RESULTS AND DISCUSSION

This systematic review identified seven major creativity models that are relevant for understanding creative development in special needs education. These models differ in their emphasis: some focus on individual cognitive processes, while others highlight developmental levels, motivation, socio-cultural validation, environmental support, and interaction between creators and audiences. **Table 1** summarizes the main creativity models reviewed in this study and their relevance to special needs education. The reviewed models offer complementary perspectives for supporting creativity in special needs education. Process-based models help teachers structure creative tasks, developmental models help recognize different levels of creative expression, and socio-cultural models emphasize the importance of supportive environments and social validation. Together, these models suggest that creativity among learners with special educational needs should not be assessed only through final products or conventional achievement standards. Instead, educators should consider students’ effort, originality, adaptive problem-solving, personal meaning-making, collaboration, and access to appropriate support. This integrative view provides the basis for the detailed discussion of each creativity model in the following sections.

3.1. Wallas’s Four-Stage Model of Creativity

Wallas’s Four-Stage Model is one of the earliest and most influential models of the creative process. The model explains creativity through four stages: preparation, incubation, illumination, and verification. In the preparation stage, individuals gather information, understand a problem, and explore possible directions. During incubation, the mind processes ideas indirectly or unconsciously. Illumination refers to the emergence of insight, while verification involves testing, refining, and applying the idea (Sadler-Smith, 2015; Yanti

et al., 2018). This model is useful for special needs education because it shows that creativity does not emerge instantly, but through a process that can be supported by teachers. Learners with special educational needs may require more structured preparation, longer incubation time, visual scaffolding, or guided verification. However, the model also has limitations. Its stages are often interpreted as linear, while creative thinking in real classrooms may be recursive, flexible, and influenced by emotional or environmental factors (Lubart, 2001; Sadler-Smith, 2015). Therefore, Wallas’s model is useful as a basic framework, but it should be adapted to accommodate diverse learning rhythms and support needs.

Table 1. Summary of creativity models and their relevance to special needs education.

CREATIVITY MODEL	MAIN FOCUS	KEY CONTRIBUTION	RELEVANCE TO SPECIAL NEEDS EDUCATION
Wallas’s Four-Stage Model	Creative process	Explains creativity through preparation, incubation, illumination, and verification.	Helps teachers scaffold creative thinking through structured stages and flexible support.
Four-C Model	Levels of creativity	Distinguishes mini-c, little-c, Pro-c, and Big-C creativity.	Supports recognition of personal, everyday, and developmental creativity among diverse learners.
Systems Model	Individual, domain, and field	Views creativity as shaped by interaction between individuals, knowledge domains, and social validation.	Emphasizes the role of teachers, peers, curriculum, and school culture in recognizing creative expression.
Piirto’s Pyramid of Talent Development	Talent development	Highlights personal traits, domain talent, environment, chance, and creative attitudes.	Encourages strength-based identification of students’ interests, abilities, and preferred modes of expression.
Componential Model	Skills, processes, and motivation	Explains creativity through domain skills, creativity-relevant processes, and task motivation.	Guides differentiated instruction, motivation-building, and accessible creative tasks.
Investment Theory	Creative resources	Emphasizes intellectual processes, knowledge, thinking style, personality, motivation, and environment.	Helps teachers identify undervalued ideas and support risk-taking among learners with diverse abilities.
Triangular Theory	Creator, work, and audience	Frames creativity as a relationship between creative output and social recognition.	Reminds educators to value non-conventional creative outputs and broaden assessment criteria.

3.2. Four-C Model of Creativity

The Four-C Model expands the understanding of creativity by distinguishing four levels: mini-c, little-c, Pro-c, and Big-C creativity. Mini-c refers to personally meaningful creativity, such as a learner’s new understanding or interpretation. Little-c refers to everyday creativity used in daily problem-solving. Pro-c represents professional-level creativity, while Big-C refers to eminent creativity that transforms a field or society (Kaufman and Beghetto, 2009; Botella et al., 2018; Rosen et al., 2020). This model is particularly relevant to special needs education because it recognizes that creativity does not need to be judged only by exceptional or public

achievement. Students with special educational needs may demonstrate creativity through personal meaning-making, adaptive responses, alternative communication, or original ways of solving classroom tasks. The mini-c and little-c levels are especially valuable because they allow teachers to recognize small but meaningful creative progress. This perspective supports inclusive assessment by valuing individual growth rather than comparing all learners to a single standard of creative performance (DeHaan, 2009; Renzulli, 1976; Rosen et al., 2020).

3.3. Csikszentmihalyi's Systems Model of Creativity

The Systems Model views creativity as the result of interaction among the individual, the domain, and the field. The individual produces ideas, the domain provides knowledge and symbolic systems, and the field evaluates and validates creative contributions. This model shifts creativity from being only an individual cognitive process to being a socio-cultural phenomenon shaped by context, recognition, and participation (Glăveanu, 2010; Glăveanu, 2012; Barrett et al., 2021). For special needs education, this model is important because it highlights the role of environment and social validation. A learner's creative potential may remain invisible if the classroom, curriculum, or assessment system does not recognize diverse forms of expression. Students with disabilities may express creativity through visual, tactile, verbal, digital, or embodied forms. Therefore, the field, represented by teachers, peers, and school systems, must be prepared to validate creative outputs that differ from conventional expectations. The model also suggests that classrooms should provide access to domains of knowledge while creating supportive social conditions for creative participation, a view that is consistent with socio-cultural and philosophical discussions of creativity (Glăveanu, 2010; Gaut, 2010).

3.4. Piirto's Pyramid of Talent Development

Piirto's Pyramid of Talent Development explains creativity as the result of multiple interacting factors, including genetic endowment, personality attributes, domain talent, environmental influences, and chance. The model also emphasizes core attitudes and creative processes such as inquiry, imagination, intuition, insight, inspiration, incubation, and improvisation (Piirto, 2021; Gottschalk, 1981). This model is useful for understanding the creative potential of learners with special needs because it does not reduce creativity to academic achievement alone. It recognizes that talent development depends on personal characteristics and environmental support. In inclusive classrooms, this means that teachers should identify students' strengths, interests, and preferred modes of expression. However, the model may still place strong emphasis on individual talent, which can be limiting if social support, collaboration, and accessibility are not sufficiently considered. For learners with disabilities, creativity may emerge through supported participation and collective activity rather than isolated individual production (Tatjana and Manić, 2019; Vuichard et al., 2023).

3.5. Amabile's Componential Model of Creativity

Amabile's Componential Model explains creativity through three main components: domain-relevant skills, creativity-relevant processes, and task motivation. Domain-relevant skills include knowledge and technical abilities in a specific area. Creativity-relevant processes include cognitive flexibility, divergent thinking, and risk-taking. Task motivation, especially intrinsic motivation, supports sustained creative engagement (Amabile and Pratt, 2016; Walia, 2019). This model has strong implications for special needs education. First, students need access to domain knowledge through accessible materials and differentiated

instruction. Second, they need opportunities to practice creative processes such as generating alternatives, making associations, and experimenting with ideas. Third, motivation is crucial because learners with special needs may experience repeated academic failure or exclusion. A supportive classroom climate can increase confidence, meaning-making, and willingness to participate creatively. The model also reminds educators that creativity can be strengthened when students are given meaningful tasks, autonomy, encouragement, and appropriate resources (Amabile and Pratt, 2016; Liang et al., 2022).

3.6. Sternberg's Investment Theory of Creativity

Sternberg's Investment Theory compares creative individuals to investors who "buy low and sell high" in the world of ideas. Creative people identify ideas that are initially undervalued, develop them, and later gain recognition when the ideas become accepted. The theory identifies six resources that support creativity: intellectual processes, knowledge, thinking style, personality, motivation, and environment (Sternberg and Lubart, 1991; Zhang and Sternberg, 2011; Sternberg and Karami, 2021b). In special needs education, this theory is relevant because it emphasizes that creativity is not a fixed trait, but a capacity shaped by multiple resources. Learners with disabilities may have strengths in particular thinking styles, interests, or problem-solving approaches that are not immediately recognized in standard classrooms. Teachers can support creativity by identifying undervalued ideas, encouraging risk-taking, and providing an environment where unusual responses are treated as opportunities for learning. However, the theory should be applied carefully because learners with special needs may face systemic barriers that limit access to resources, recognition, or support (Sternberg, 2009; Sternberg, 2020; Mehta and Dahl, 2018).

3.7. Triangular Theory of Creativity

The Triangular Theory of Creativity emphasizes the relationship among the creator, the audience, and the work. It views creativity as a socially constructed phenomenon in which an idea or product becomes creative when it is recognized as novel and valuable by an audience. This theory also highlights constructive defiance, where creative individuals challenge existing assumptions and propose new perspectives (Sternberg, 2018; Glăveanu, 2009; Godart et al., 2020). For special needs education, this theory is meaningful because it draws attention to the audience's role in recognizing creativity. Students with special educational needs may produce creative work that is overlooked because it does not match conventional forms of expression. Teachers and peers, therefore, play an important role as audiences who interpret, value, and respond to students' creative efforts. Inclusive classrooms should encourage multiple forms of creative expression and avoid limiting creativity to highly polished or standard outputs. However, this model also needs to consider institutional barriers, including rigid assessment systems and narrow definitions of achievement (Kontos et al., 2020; Glăveanu and Tanggaard, 2014).

3.8. Implications for Special Needs Education

Across the reviewed models, creativity appears as a multidimensional construct involving cognitive processes, motivation, social interaction, cultural validation, domain knowledge, and environmental support. Earlier models, such as Wallas's Four-Stage Model, are useful for understanding the process of creative thought, while contemporary models offer broader insights into developmental, social, and ecological dimensions of creativity. This progression reflects a shift from individual-centered explanations toward more dynamic and contextual understandings of creativity (Lubart, 2001; Küpers et al., 2018; Moruzzi, 2020). For special

needs education, the most relevant insight is that creativity should be understood flexibly. Students with special educational needs may demonstrate creativity through personal meaning-making, alternative communication, adaptive problem-solving, artistic expression, or collaborative participation. Therefore, creativity models should not be applied as rigid frameworks. Instead, educators should combine insights from different models to design learning environments that support diverse abilities. This requires accessible materials, scaffolding, emotional support, open-ended tasks, and assessment practices that recognize both process and product (Luria et al., 2016; Hughes et al., 2018; Witczak et al., 2024). The review also shows that integrative approaches are more suitable than single-model approaches. The Four-C Model helps teachers recognize different levels of creativity, the Componential Model highlights motivation and skills, and the Systems Model emphasizes social and cultural validation. Together, these perspectives can guide curriculum design, teacher preparation, and classroom intervention. In inclusive classrooms, teachers should provide opportunities for divergent thinking, experimentation, collaboration, and reflection while ensuring that students' creative outputs are recognized within their own developmental and cultural contexts (Amabile and Pratt, 2016; Kaufman and Beghetto, 2009; Glăveanu and Kaufman, 2019). Overall, the reviewed models suggest that creativity in special needs education should be supported through flexible, context-sensitive, and strength-based approaches. Rather than viewing disability as a limitation to creativity, inclusive education should recognize diverse abilities as possible sources of creative expression. Future research should develop and validate creativity frameworks specifically designed for learners with special educational needs, including assessment tools that capture process, effort, originality, adaptability, and contextual meaning. Creativity models also need to consider emerging forms of creative practice and the changing contexts in which creative ideas are produced. Contemporary discussions show that creativity may emerge through variations of existing ideas, concept recombination, and dynamic creative processes in changing environments (Agarwal, 2023; Fortwengel et al., 2016). In broader educational contexts, creative capacity can be supported through knowledge, flexible thinking, and opportunities to transform ideas into meaningful outcomes (Kim and Lee, 2020). In addition, models of giftedness and wisdom highlight that creativity can involve different types of contribution, transformation, and responsible judgment, which are relevant for designing inclusive learning environments that recognize diverse creative strengths (Sternberg, 1999; Sternberg and Karami, 2021a).

3.9. Comparative Synthesis of Creativity Models for Inclusive Practice

The reviewed creativity models show that creativity can be understood from different but complementary perspectives. Some models emphasize internal cognitive processes, while others focus on motivation, talent development, social recognition, cultural systems, or environmental support. For special needs education, this diversity is important because learners with disabilities may not always demonstrate creativity through conventional academic products. Their creative potential may appear through adaptive problem-solving, personal meaning-making, alternative communication, sensory exploration, collaborative participation, or small improvements in task engagement. Therefore, creativity models should be interpreted in ways that are flexible enough to recognize diverse forms of expression and participation.

Table 2 presents a comparative synthesis of the reviewed models based on their main orientation, possible strengths, limitations, and implications for special needs education. No single model fully explains creativity in special needs education. Process-based models are

useful for organizing classroom activities, while developmental models help teachers recognize different levels of creative growth. Socio-cultural and relational models are especially important because they show that creativity depends not only on the learner but also on the environment that recognizes and supports creative expression. This is consistent with the view that creativity is shaped by cognitive, social, and cultural conditions rather than by individual ability alone (Glăveanu, 2010; Glăveanu, 2012; Barrett et al., 2021). For learners with special educational needs, the implication is that creativity should be assessed through multiple indicators, including effort, originality, flexibility, communication, persistence, and meaningful participation.

Table 2. Comparative synthesis of creativity models for special needs education.

CREATIVITY MODEL	MAIN ORIENTATION	STRENGTH FOR SPECIAL NEEDS EDUCATION	LIMITATION	INCLUSIVE IMPLICATION
Wallas’s Four-Stage Model	Process-based	Helps structure creative tasks into preparation, incubation, illumination, and verification.	Can appear too linear if applied rigidly.	Teachers can scaffold each stage using visual support, flexible time, and guided reflection.
Four-C Model	Developmental	Recognizes personal and everyday creativity, not only eminent creativity.	May still require clear criteria for assessing small-scale creativity.	Mini-c and little-c creativity can be used to value individual progress among diverse learners.
Systems Model	Socio-cultural	Emphasizes the role of classroom culture, peers, teachers, and curriculum in validating creativity.	May be complex to translate into a classroom assessment.	Schools should broaden what counts as creative expression.
Piirto’s Pyramid of Talent Development	Talent-development	Recognizes personality, domain talent, environment, and chance.	May overemphasize individual talent if social support is ignored.	Teachers should identify strengths, interests, and preferred modes of expression.
Componential Model	Skill-motivation-based	Links creativity to domain skills, creative processes, and task motivation.	Requires careful adaptation for learners with limited access to domain knowledge.	Differentiated instruction and intrinsic motivation are essential.
Investment Theory	Resource-based	Encourages recognition of undervalued ideas and risk-taking.	May understate systemic barriers faced by learners with disabilities.	Teachers should create safe spaces for unusual ideas and alternative responses.
Triangular Theory	Relational and evaluative	Highlights the role of the audience and social recognition.	Recognition may be biased by conventional standards.	Peers and teachers should be trained to value non-standard creative outputs.

The comparison also shows that creativity models need to be adapted to the realities of inclusive classrooms. Wallas's model, for example, can help teachers design step-by-step creative learning, but students with disabilities may require more time during preparation and verification. Similarly, the Four-C Model is useful because it recognizes mini-c and little-c creativity, which are more appropriate for classroom-based assessment than Big-C creativity. This model supports the idea that small but meaningful creative progress should be valued, especially when students demonstrate new ways of understanding, expressing, or solving problems (Kaufman and Beghetto, 2009; Rosen et al., 2020). In this sense, creativity becomes not only a measure of outstanding achievement but also a developmental process that supports participation and confidence.

The Systems Model and Triangular Theory are particularly relevant for inclusive education because they challenge the assumption that creativity exists only inside the individual. These models show that creative work must be recognized, interpreted, and supported by others. In special needs education, this means that teachers, peers, and school systems function as important audiences and validators of creativity. If they rely only on conventional standards, many creative expressions of learners with disabilities may be ignored. Therefore, inclusive classrooms need assessment practices that value diverse products, processes, and modes of expression (Glăveanu and Tanggaard, 2014; Godart et al., 2020). This includes accepting oral, visual, tactile, digital, collaborative, and embodied forms of creative output.

The Componential Model and Investment Theory also provide useful implications for special needs education. Amabile's model highlights the importance of domain-relevant skills, creative thinking processes, and motivation, suggesting that students need both access to knowledge and encouragement to experiment with ideas (Amabile and Pratt, 2016; Walia, 2019). Sternberg's Investment Theory adds that creative ideas may initially be undervalued, which is important in inclusive classrooms because students with special needs may produce unconventional responses that require careful interpretation rather than immediate correction (Sternberg and Lubart, 1991; Zhang and Sternberg, 2011). Together, these models suggest that teachers should avoid narrow judgments and instead create learning environments where unusual ideas can be explored, refined, and valued.

3.10. Pedagogical Strategies for Applying Creativity Models in Special Needs Education

The reviewed models suggest that creativity in special needs education should be supported through intentional pedagogical design. Learners with special educational needs may require structured opportunities to explore ideas, communicate in different ways, collaborate with peers, and receive feedback that affirms their strengths. Creativity is not only a cognitive product but also a classroom process that depends on access, support, motivation, and recognition. Therefore, teachers need strategies that translate creativity theories into inclusive classroom practices.

Table 3 summarizes possible pedagogical strategies derived from the reviewed creativity models. Creativity models can be translated into classroom strategies that support both individual and collaborative learning. For example, Wallas's model can guide teachers in designing structured creative activities, while the Four-C Model can help them recognize small-scale creative growth. The Componential Model suggests that students need accessible knowledge, creative thinking opportunities, and motivation, while the Systems Model and Triangular Theory emphasize that creativity must be recognized by the classroom community. These strategies are especially important for learners with special educational needs because

creativity may appear through alternative forms of expression that are not always captured by standard academic assessment.

Table 3. Pedagogical strategies for applying creativity models in special needs education.

PEDAGOGICAL STRATEGY	RELATED CREATIVITY MODEL	CLASSROOM APPLICATION	EXPECTED BENEFIT FOR LEARNERS WITH SPECIAL NEEDS
Step-by-step creative task design	Wallas’s Four-Stage Model	Guide students through preparation, idea exploration, reflection, and revision.	Reduces confusion and supports learners who need structured routines.
Recognition of small creative progress	Four-C Model	Assess personal meaning-making, everyday problem-solving, and adaptive responses.	Builds confidence and values individual growth.
Multiple modes of creative expression	Systems Model; Triangular Theory	Allow students to express ideas through drawing, movement, oral explanation, objects, digital tools, or collaboration.	Supports students with communication, sensory, or motor differences.
Strength-based talent exploration	Piirto’s Pyramid	Identify students’ interests, preferred activities, and emerging talents.	Encourages participation based on ability rather than deficit.
Motivation-supportive creative tasks	Componential Model	Provide meaningful tasks, autonomy, choice, and encouraging feedback.	Increases intrinsic motivation and persistence.
Safe space for unconventional ideas	Investment Theory	Treat unusual responses as starting points for inquiry and discussion.	Helps students develop risk-taking and flexible thinking.
Collaborative creativity	Systems Model; socio-cultural approaches	Use peer projects, shared storytelling, group problem-solving, and co-created products.	Promotes social participation and reduces isolation.
Inclusive creative assessment	Four-C Model; Triangular Theory	Assess process, effort, originality, adaptability, and participation, not only final products.	Provides fairer recognition of diverse creative abilities.

One important implication is that creative tasks should be scaffolded without becoming overly restrictive. Students with special needs may benefit from clear instructions, visual prompts, examples, peer support, and guided reflection. However, they also need space to make choices, explore alternatives, and produce original responses. This balance between structure and freedom is essential because creativity requires both support and autonomy. The Componential Model emphasizes the importance of task motivation, while Wallas’s model shows that creative thought develops through stages that can be supported by appropriate teaching strategies (Sadler-Smith, 2015; Amabile and Pratt, 2016). In inclusive classrooms, teachers can apply this by providing open-ended tasks with clear steps, flexible materials, and multiple acceptable outcomes.

Another implication is the need for inclusive creative assessment. Traditional assessments often emphasize final products, correctness, or comparison with normative standards. Such approaches may not adequately capture the creative potential of learners with disabilities. The Four-C Model offers a more inclusive perspective because it allows teachers to value personal and everyday creativity (Kaufman and Beghetto, 2009). Similarly, the Triangular

Theory reminds educators that creativity depends on how audiences interpret and value creative work (Sternberg, 2018). Therefore, teachers should assess creativity through process-based indicators, such as originality, persistence, flexibility, effort, problem-solving, collaboration, and meaningful participation. This approach can make creativity assessment more equitable for students with diverse learning profiles.

Collaborative creativity is also important in special needs education. Some learners may find it difficult to produce creative outputs independently, but they may contribute meaningfully in shared activities. Socio-cultural perspectives suggest that creativity can emerge through interaction, participation, and cultural tools rather than through isolated individual effort (Glăveanu, 2010; Barrett et al., 2021). In inclusive classrooms, group storytelling, peer-assisted art projects, design tasks, dramatization, and shared problem-solving can help students participate creatively while developing communication and social skills. This is particularly relevant for students who require peer modeling, emotional support, or alternative communication methods.

The reviewed models also suggest that teachers must be trained to recognize creativity in diverse forms. If teachers expect creativity only in polished writing, advanced artistic products, or highly verbal explanations, they may overlook creative expressions shown through gestures, drawings, object manipulation, movement, sensory exploration, or adaptive responses. The Systems Model shows that the “field” plays a role in validating creativity, meaning that teacher judgment strongly influences whether a student’s creative contribution is recognized (Glăveanu, 2012; Godart et al., 2020). Therefore, teacher preparation programs should include training on inclusive creativity, differentiated assessment, multimodal expression, and strength-based pedagogy.

Finally, the integration of creativity into special needs education should be understood as part of a broader inclusive practice. Creativity can support confidence, agency, communication, and problem-solving among learners with diverse abilities. It also allows students to demonstrate competence in ways that may not be possible through conventional instruction. Contemporary discussions of creativity emphasize the importance of variation, recombination, interdisciplinary thinking, and flexible environments (Agarwal, 2023; Fortwengel et al., 2016). These ideas are useful for inclusive education because they encourage teachers to view difference not as a limitation but as a possible source of creative expression. Thus, creativity models can help educators design classrooms where learners with special needs are supported not only to participate but also to contribute original and meaningful ideas.

4. CONCLUSION

This systematic review shows that creativity is a multidimensional construct that can support special needs education when understood through flexible and inclusive frameworks. The reviewed models explain creativity through cognitive processes, developmental levels, motivation, domain knowledge, social validation, environmental support, and cultural context. Earlier models, such as Wallas’s Four-Stage Model, help explain the creative process, while contemporary models emphasize interaction, collaboration, and ecological support. For learners with special educational needs, creativity should be recognized through diverse forms of expression, including alternative communication, adaptive problem-solving, artistic production, and collaborative participation. Therefore, educators should use integrative approaches that combine scaffolding, open-ended tasks, supportive environments, and

inclusive assessment. Future research should develop creativity models and assessment tools specifically designed for diverse learners in special needs education.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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