



Creativity and Innovative Practices in Special Needs Education

Ahmed Halimat Oyiza (Mrs)
Department of Special Education
Federal College of Education, Okene-Kogi State
ahalimatoyiza@gmail.com

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ABSTRACT

Creativity and innovative play a critical role in enhancing teaching and learning practices within special needs education, where diverse learner profiles require flexible, inclusive, and individualized approaches. This abstract explores the meaning and significance of creative and innovative practices in addressing the learners with disabilities. This involves the use of adaptive teaching strategies, multisensory learning experiences, assistive technologies, and differentiated instruction to foster engagement, motivation, and meaningful participation. The paper highlights how these practices empower educators to move beyond traditional, one-size-fits-all instructional models and instead cultivate learner-centered environments that value individual strengths and abilities. Furthermore, creativity and innovation support the development of problem-solving skills, independence, and self-expression among students with special needs, contributing to their academic success and overall well-being. The paper also looks at the challenges of implementation including limited resources, insufficient training, and systemic constraints. Ultimately, the abstract underscores that sustained investment in creativity and innovative practices is essential for building inclusive educational systems that promote equity, participation, and lifelong learning opportunities for students with special needs.

Keywords: *Creativity, Innovation, Adaptive teaching, Differentiated Instruction, and Assistive Technology*

INTRODUCTION

Creativity and innovation play a vital role in special needs education by ensuring that learning is inclusive, flexible, and responsive to the diverse abilities of students. Special needs education focuses on supporting learners with disabilities. Because each learner has unique strengths and challenges, traditional teaching methods are often insufficient. Creative and innovative practices help educators design personalized learning experiences that promote engagement, independence, and holistic development. Educators need to tackle skills inequality and skills uncertainty (Winthrop et al. 2018). In the global world, education systems favored some groups while some are penalized. Schools and society at large marginalized people with special needs (Kubota, 2015). By prioritizing creativity and innovation for students with special needs, skills inequality and skills uncertainty may be diminished. Through creativity and innovation, the seek to remedy disparities in skill acquisition can empower marginalized students to take control of their future, to be on par with society, and thereby reduce oppression (Gonzalez et al., 2017).

MEANING OF CREATIVITY AND INNOVATIVE PRACTICES IN SPECIAL NEEDS EDUCATION

Creativity and innovative practices in special needs education refer to the use of new ideas, flexible teaching methods, and imaginative approaches to help learners with disabilities or



learning difficulties understand lessons and develop their abilities. These approaches focus on adapting teaching to the unique needs of each learner rather than using only traditional teaching methods (Swanzy-Impraim, E., 2026)

Creativity in special needs education means the ability of teachers and educators to design original, flexible, and engaging ways of teaching that suit learners with different disabilities such as learning disabilities, visual impairment, hearing impairment, autism, or intellectual disabilities. There is Use of imagination in teaching. Teachers design activities that make learning easier and more interesting. Adapting materials and methods such as Using charts, pictures, models, games, music, or storytelling to explain concepts Problem-solving ability (Novak, E., et al. 2024).

Finding alternative ways to teach when a learner does not understand through normal methods. Encouraging student expression by allowing learners to express ideas through drawing, drama, music, or hands-on activities. (Zhang, Q., et al 2024). Example, A teacher may use visual cards, role-play, or storytelling to help a child with learning difficulties understand a lesson instead of relying only on textbooks (Zhang, Q., et al. 2024).

Innovative Practices in Special Needs Education are new or improved teaching strategies, tools, or technologies that help students with special needs learn more effectively. Innovation focuses on improving educational outcomes by introducing better ways of teaching, learning, and supporting learners with disabilities. It uses assistive technology tools like speech-to-text software, audio books, and communication devices. it also use individualized instruction by designing lessons based on each learner's strengths and weaknesses. Inclusive teaching strategies are applied by allowing students with disabilities to learn together with other students. Collaborative teaching is used whereby teachers working with therapists, parents, and specialists. Flexible learning environments must be applied by adjusting classroom structure, teaching pace, and assessment methods(Mareza, L., & Tek, O. E., 2024).

EXAMPLES OF INNOVATIVE PRACTICES IN SPECIAL NEEDS EDUCATION

Some common innovative practices include: Individualized Education Program (personalized learning plan designed for each learner with special needs), Assistive Technology (Devices such as screen readers, hearing aids, and educational apps), Multisensory Teaching (Using sight, sound, touch, and movement to teach concepts), Peer Tutoring (Students helping each other learn), and Differentiated Instruction (Teaching the same concept in different ways to suit different learners).

INDIVIDUALIZED EDUCATION PROGRAMME (IEP)

Individualized Educational Programmes (IEPs) are widely regarded as an important innovation in special needs education because they shift teaching from a one-size-fits-all approach to a personalized, student-centered learning plan. An Individualized Educational Programme (IEP) is a written educational plan designed specifically for a learner with special educational needs or disabilities. It outlines the learner's current abilities, learning goals, support services, teaching strategies, and evaluation methods (Aldas, et al. 2025).

IEPs ensure that students with disabilities receive appropriate and tailored instruction that helps them achieve their academic and developmental potential. IEPs contains Student Information (Name, Age, Gender), Present Level of Performance (PLP), Learning Goals and Objectives, Instructional Strategies (Task Breakdown, Multisensory Teaching, Individual Tutoring), Support Services(Counseling, Occupational Therapy, Speech/Language



Therapy), Assessment and Evaluation(Classroom Observation, Test Adapted Ability, Portfolio Assessment) , Review and Revision Plan (Arcipe, et al. 2025)

IEPs are innovative because they emphasize individualization and collaboration in a characteristics forms which include:

1. Learner-centered planning i.e : Focuses on the individual strengths and needs of the student.
2. Specific learning goal i.e : Clearly defined short-term and long-term objectives.
3. Collaborative development i.e - Created by a team including teachers, parents, specialists, and sometimes the student.
4. Continuous assessment i.e: Progress is regularly monitored and adjustments are made when necessary.
5. Support services included i.e: May involve speech therapy, counseling, assistive technology, or specialized instruction.

IEPs play a crucial role in improving the quality of education for learners with disabilities by: Personalized learning suited to each learner's ability, Improved academic outcomes through targeted teaching, Better inclusion in regular classrooms, Clear communication between teachers, parents, and specialists as well as early identification and intervention for learning difficulties (Nagandren, S., Che Hassan, N., & Hassan, A. 2025).

IEPs are Considered Innovative in special education because they:

- Replace traditional uniform teaching methods with individualized instruction.
- Encourage team collaboration in educational planning.
- Use data-driven decision making to track student progress.
- Promote inclusive education, allowing students with disabilities to learn alongside peers (U.S. Department of Education, 2025).

ASSISTIVE TECHNOLOGY (AT)

Assistive Technology (AT) is an important innovative practice in special needs education because it uses tools, devices, and software to help learners with disabilities overcome barriers to learning and participation in school activities. AT refers to any device, equipment, software, or system that helps individuals with disabilities perform tasks that might otherwise be difficult or impossible (WHO, 2015). In education, AT supports students with physical, sensory, cognitive, or learning disabilities so they can access the curriculum and participate effectively in classroom activities. AT enhances independence by allowing students to perform tasks on their own, it improves access to educational materials, it supports communication for students with speech difficulties, it promotes inclusion in regular classrooms, and it increases motivation and confidence in learning (Hoogerwerf , et al. 2021).

In special needs education, the types of AT used are:

1. Visual AT: It is used to supports students with visual impairments e.g., screen readers, braille machines, magnification software, audio books.
2. Hearing AT: It is used to supports students with hearing impairments e.g., hearing aids, FM systems, captioned videos, visual alert systems.
3. Communication AT: It helps students who have speech or language difficulties e.g., communication boards, speech-generating devices, symbol-based communication apps
4. Learning AT: It supports students with learning disabilities such as dyslexia e.g., spell-check software, reading software, graphic organizers, digital note-taking tools
5. Mobile AT: It helps students with physical disabilities e.g., wheelchairs, adaptive keyboards, touch screens, switch access devices.



MULTISENSORY LEARNING

Multisensory learning is a powerful and innovative approach in special needs education that engages multiple senses to help students with disabilities learn more effectively. The basic idea behind multisensory instruction is to present information using a variety of sensory channels: visual, auditory, kinesthetic (movement), and tactile (touch), among others. This approach has proven especially beneficial for students with learning disabilities, autism spectrum disorder (ASD), ADHD, and other special educational needs (Kamenopoulou, L. [2022](#)).

Multisensory learning involves:

- Visual: Learners use their sense of sight through written text, pictures, charts, and videos.
- Auditory: Students listen to instructions, read aloud, or use audio cues to reinforce concepts.
- Kinesthetic: Learning is reinforced through physical movement-writing, hands-on activities, and other motor tasks.
- Tactile: Involves activities that use the sense of touch, such as feeling textures, handling objects, or using manipulatives (e.g., Braille for visually impaired students).

Multisensory learning helps reinforcing learning in different ways, increasing memory retention. It caters to diverse learning styles and provides more pathways for understanding complex ideas. It helps activate different parts of the brain, making the learning experience more memorable. It is tailored to the individual needs of each students. For example, students with visual impairment may benefit from tactile materials, while students with ADHD may need more movement or auditory support (Birsh, J. R., & Carreker, S. [2018](#)).

Multisensory methods are often more interactive and engaging than traditional teaching methods. Activities that involve multiple senses can capture students' attention and keep them interested in learning. It allow students to learn in ways that best suit their abilities and create a more inclusive classroom environment where students with a range of disabilities can participate and succeed.

For examples;

- Word Mapping: For students with dyslexia, using large, tactile letters and associating them with pictures and sounds (e.g., a letter "B" could be paired with a ball, sound "buh") helps them learn to recognize and decode words.
- Interactive Storytelling: Teachers may read a story aloud, using gestures, props, or images to represent characters or events. This helps students with ASD or speech delays connect to the narrative more deeply.
- Movement ad Learning Games: Games that involve jumping, clapping, or moving objects can great to kinesthetic learners or students with ADHD, helping them stay focused and retain information while getting some energy out (Shaywitz, S. E. (2020

ADAPTIVE TEACHING STRATEGIES

Adaptive teaching strategies are considered an innovative practice in special needs education because they allow teachers to adjust instruction to meet the diverse learning needs of students with disabilities or learning difficulties. Instead of using one fixed teaching method for all learners, adaptive teaching modifies content, methods, pace, and assessment so that every student can participate and succeed. It is a flexible instructional approach where the teacher continuously adjusts teaching strategies based on students'



abilities, learning styles, interests, and progress. It is widely used in special needs education to support learners with conditions such as Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder, Dyslexia, and other learning disabilities (Sitjar, R. V. R. 2025)

Adaptive teaching strategies usually include:

Individualized instruction i.e., teaching is adjusted to the individual needs of each learner. For examples; simplified instructions for students with learning difficulties, advance tasks for gifted learners.

- Flexible teaching methods i.e., teacher use multiple instructional approaches such as: visual aids, demonstrations, audio materials, hands-on activities, technology-based learning.
- Differentiated learning tasks i.e., students work on different tasks or levels of difficulty depending on their ability e.g., one student solves basic problems, another student works on more complex problems, a third student receives guided assistance.
- Continuous assessment i.e., teachers frequently evaluate students to monitor progress and adjust teaching methods such as: observation, short quizzes, practical activities, portfolio assessment.

Adaptive teaching in special needs education promote inclusive education by allowing students with disabilities to learn alongside their peers in inclusive education environments. It also improves learning outcomes by allowing students understand lessons better when teaching matches their abilities. Adaptive teaching builds confidence and motivation when tasks are achievable, students develop self-esteem and motivation. It encourages participation by all students in the classroom activities (Mareza, L., & Tek, O. E. 2024).

DIFFERENTIATED INSTRUCTION

Differentiated Instruction (DI) involves adjusting teaching methods, materials, learning activities, and assessments to meet the diverse learning needs, abilities, and interests of students in a classroom. Instead of teaching all students in the same way, teachers modify instruction so that each learners can access the curriculum and succeed. In other words, DI is a teaching approach in which educators adapt content, process, products, and learning environment according to students' readiness levels, learning profiles, and interests (Bobi, C.B., & Ahiavi, M.A., 2023).

The concept is strongly associated with the work of Carol Ann Tomlinson, who defined DI as a way of proactively planning varied approaches to what students learn, how they learn it, and how they demonstrate learning.

In special needs education, DI ensures that students with conditions such as Autism Spectrum Disorder, Dyslexia, Attention Deficit Hyperactive Disorder, and Intellectual Disabilities receiving instruction that suits their individual learning needs. DI comprises four key elements (Nisa et al. 2023) these are:

- Differentiation of contents: content refers to what students learn. Teachers will modify reading materials and complexity of information as well as learning resources. For examples; simplified texts for struggling learners, audio books for students with reading difficulties, visual materials for learners with comprehension challenges.
- Differentiation of process: process refers to how students learn the content. Teachers may use small group instruction, peer tutoring, hands-on activities, visual supports and demonstrations. For example, students with learning disabilities may learn mathematics through manipulative, diagrams, or interactive activities instead of traditional lectures.
- Differentiation of product: product refers to how students demonstrate what they have learned. Students may show understanding through oral presentation, written



assignments, projects or models drawings or diagrams. For example, a student with writing difficulty may explain verbally instead of submitting a long essay.

- Differentiation of learning environment: this involves modifying the physical and emotional classroom environment. For examples; quiet learning corners, flexible seating arrangements, positive classroom climate. These help learners with attention problems or sensory sensitivities learn better.

CHALLENGES IN IMPLEMENTING CREATIVITY AND INNOVATIVE PRACTICES IN SPECIAL NEEDS EDUCATION

Implementing creative and innovative practices in special needs education can greatly improve learning for students with disabilities, but schools and teachers often face several challenges. These challenges affect how effectively strategies can be applied for learners with disabilities.

Below are the major challenges in implementing creativity and innovative practices in special needs education (Saigar, S.C., & Jamaludin, K.A. 2025):

- Lack of adequate teacher training: many teachers do not received sufficient training in special education or innovative teaching methods. As a result, they may find it difficult to apply creative strategies. Without proper professional development, teachers may rely on traditional teaching methods, which may not meet the needs of students with disabilities.
- Insufficient teaching resources and materials: Creative and innovative teaching often require specialized materials. In many schools, especially in developing regions or societies, the resources are limited or unavailable, making it difficult to implement innovative practices.
- Large class sizes: Large classrooms make it difficult for teachers to provide individualized attention to students with special needs. Creative practices such as: individualized instruction, flexible grouping, activity-based learning require time and attention, which becomes challenging when one teacher manages many students at once.
- Limited funding: Implementing innovative practices often requires financial investment in the areas of teacher training, assistive technology, specialized learning materials, and classroom modification. Many educational institutions lack adequate funding to support these innovations.
- Lack of administrative support: School administrators sometimes prioritize standardized academic outcomes over inclusive and creative teaching approaches. Without strong leadership and policy support, teachers may find it difficult to introduce innovative strategies in their classrooms.
- Negative attitudes and stigma: In some communities, there are misconceptions and stigma surrounding children with disabilities. This can lead to low expectations for students with special needs. Lack of supports from the parents or society resistance to inclusive and innovative practices, such attitudes can discourage teachers from experimenting with creative teaching methods.
- Time constraints: Creative teaching approaches often require extra planning and preparation. Teachers must design varied activities, adapt materials for different learners, and assess students in multiple ways. With heavy workloads, many teachers struggle to find enough time to plan and implement these innovative practices.

CONCLUSION

In conclusion, creativity and innovative practices play a vital role in improving the quality of education for learners with special needs. These approaches allow teachers to adapt teaching methods, learning materials, and classroom environments to meet the diverse abilities and learning styles of students with disabilities. Through innovative strategies, educators can create meaningful learning experiences that promote participation, independence, and academic success among students with special needs. These practices also help build students' confidence, improve social interaction, and ensure that every learner has equal access to education. Adopting creative and innovative practices is essential for achieving inclusive and equitable education, ensuring that all learners regardless of their abilities are given the opportunity to reach their full potential.

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