

RESEARCH ARTICLE:

Engaging Creativity as an Alternative for Sustainable Inclusion and Integration in Schools: Visual Participatory Approach

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Abstract

Currently, the creativity approach is seen as one of the strategies used to support education through the teaching and learning process. In this regard, an art-based creative approach was used as a research design, which in recent years has been massively developed and has generated multiple data in research studies. Despite its collaborative feature and benefits, the creative approach is not usually employed in the teaching and learning process in schools, because this approach requires resources and time to accomplish the goals for the teaching and learning process in schools. This paper aims to evidence the use of the creative approach as an alternative for the sustainable inclusion and integration of learners in South African schools, as well as why it should be used as a supportive model in the educational context. To do this, the study presents a creative visual participatory approach which was done using recycled materials. The creative visual participatory approach and focus group interviews were employed with six teachers and six learners in the intermediate and senior phases in selected primary schools. Thematic data analysis enabled us to identify codes and themes that indicated the practical examples for inclusion and integration programs, events and sessions in schools. The data generation methods used met the standards of creativity expectations and extended the possibility of availability of recyclable resources and materials within the school environment. The findings reveal that creativity enhances critical thinking and problem-solving skills; thus, at present, both teachers and learners are benefiting from the use of this innovative strategy. The study also insists that it is crucial to employ the creativity approach for sustainable inclusion and integration of learners in South African school contexts.

Keywords: sustainability; creativity; integration; inclusion; visual participatory approach

Introduction

Post-independent educational reforms brought numerous complexities to professional practices to most South African teachers. Pandor (2018) explains issues such as classroom climates, teaching and learning resources, and social and community issues, and how they affect professional practices in the context of teaching and learning in South African schools. She further mentions that such issues are multifaceted, varied and difficult to be solved through ordinary solutions. Drawing from the Education White Paper 6 of 2001 (EWP6) policy (Department of Education, 2001), whose focus is on the inclusion and integration of learners, the document focuses on fostering new roles for teachers in classrooms as they are now required to go the extra mile by employing diverse teaching strategies to cater for diverse learning styles and needs for each learner in the classroom (Kanyopa, 2023; Naidoo, 2018). The principles of EWP6 (Department of Education, 2001) present a comprehensive set of skills and values and encourage positive attitudes for teachers in their workplaces. Consequently, Jacobs and Govender (2020) affirm that the basic goal of EWP6 is to facilitate schools' programs and practices that intentionally influence the development of independence and active participation of all learners within the classroom and in the social

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interactive environment. In the context of this study, the creativity approach is viewed as a strategy for promoting sustainable inclusive and integrative teaching and learning in South African schools. The study highlights creative abilities as a modern strategy for inclusion and integration in schools. Essentially, the aim is to introduce creativity as an alternative for sustainable inclusion and integration of learners at schools. It has been affirmed that in a world that is becoming increasingly diverse and interconnected, fostering sustainable inclusion and integration has become an essential goal for societies worldwide (Ioannidi and Malafantis, 2022; Kanyopa, 2022; Lakkala and Óskarsdóttir, 2021).

Most traditional approaches to inclusion and integration focus on policy frameworks and tangible resources, but there is an emerging recognition that creativity and visual participatory approaches can play a significant role in promoting sustainable inclusion and integration in school contexts (Ritter and Mostert, 2017; Rosseel and Anseel, 2022). Thus, this study embraced the visual participatory approach to explore the power of engaging creativity to foster sustainable inclusion and integration in schools. Gal (2023: 22) asserts that creativity through the use of recycled materials allows learners to understand the abstract concepts of inclusion and integration in a concrete and practical way, while “protecting their environment, reducing pollution and preserving natural resources”. Moreover, the current research agrees with researchers such as Ioannidi and Malafantis (2022), Pandor (2018) and Robson (2022), who recognise that sustainable inclusion and integration can be achieved by using alternative innovative skills within the educational environment. For this reason, we also maintain that creativity is one of the educational innovative models that allows learners to easily acquire knowledge and skills, while ensuring their active participation and contribution and commitment to the fourth Sustainable Development Goal of the United Nations, which seeks to ensure quality education for all learners regardless of their abilities or disabilities (Anyim, 2021). However, it is important to note that creative art-based research approaches may require careful consideration of ethical implications in the research process (Taquette and Borges da Matta Souza, 2022). This implies that the researcher needs to ensure the voluntarily participation of participants, rigor in data collection and analysis, and clear communication of findings to ensure the validity and credibility of the research outcomes (Flick, 2020; Kanyopa and Mokhele-Makgalwa, 2024; Leavy, 2022).

Due to constant changes in school curricula and various movements in the South African education system, some scholars (e.g., Naidoo, 2018; Zoch, 2017) believe that the country’s education system still grapples with challenges inherited from the apartheid education system. They argue that the primary challenges schools face in the post-apartheid era revolved around the inclusion and integration of learners in schools (Gamoran and An, 2016). Conversely, Kanyopa (2022); Kozibroda *et al.* (2020) argue that successful implementation of inclusion and integration requires a comprehensive set of innovative skills, positive attitudes and willingness to prepare South African learners for their future well-being. Over the past several years, significant efforts have been made in this regard in South Africa, including prerequisites for policies and professional preparation (Kanyopa, 2023; Zoch, 2017). Inclusion and integration in South Africa are seen as a reform effort that necessitates the entire education system to focus not only on learners at school but also on teachers and other staff members to improve all practices and programs to accommodate everyone in the school environment (Kanyopa, 2022). Referring to the South African Schools Act (SASA) (1996), the policy emphasises inclusive and integrative educational practices in schools. Some scholars affirm that the policy lacks clarity concerning these concepts, leading schools to adopt poor implementation strategies (Naidoo, 2018). Consequently, this remains a challenge for the South African education system, particularly regarding inclusion and integration of the linguistic, cultural and diverse educational needs of the learners (Kozibroda *et al.*, 2020). Kanyopa (2022) affirms that this challenge stems from the country’s unique educational history that includes apartheid, poverty, diversity and the scarcity of resources in schools. All these have been seen as significant obstacles to sustainable inclusion and integration in schools up until now. Some scholars also agree that parents, teachers and other staff members are in a dilemma and experience stress regarding the realisation of inclusion and integration of learners in South African schools (Gamoran and An, 2016).

Building upon the discussion above, this paper argues that due to racial and ethnic segregation in South African schools, innovative skills such as arts, music and creativity and other collaborative skills are crucial as they create a space for all learners and foster their active participation. It is also believed that with alternative innovative skills, schools can eliminate all forms of discrimination and prejudice, while simultaneously fostering respect and appreciation for each other’s uniqueness. Literature indicates that inclusion and integration are well-intentioned in the South African educational context; however, the reality is that: (i) many teachers lack the necessary training to meet the diverse learning demands of their learners; and (ii) schools lack the resources necessary to adequately support inclusion and integration (Kozibroda *et al.*, 2020). Furthermore, other literature reminds us that because

some individuals are unwilling to freely accommodate people of different races and cultures, South African schools face numerous obstacles in the realisation and promotion of sustainable inclusion and integration (Kanyopa, 2022).

Literature Review

In the educational context, inclusion and integration are the philosophies that seek the acceptance and acknowledgement of learners (Ioannidi and Malafantis, 2022). These concepts mainly focus on developing learners' sense of belonging by being valued and celebrating their differences (Adonis *et al.*, 2022). The basic goal for inclusion and integration in the school environment is to develop the independence of learners and encourage active participation and engagement in both social interactions and the learning process (Anyim, 2021; Jacobs and Govender, 2020). Additionally, education is the key to achieving sustainable development and basic human rights (Pandor, 2018). On this basis, inclusion and integration need to take place to promote the right to education and active participation, ensuring the progress and presence of learners at school. Walton and Engelbrecht (2022) affirm that sustainable inclusion and integration in schools ensures equal involvement and opportunities to all learners regardless of their differences. Doron (2017) and Gumula (2020) concur that alternative innovative skills such as creativity, networking, brainstorming, ideation and visual arts can be useful strategies in supporting inclusion and integration in teaching and learning processes. The creative approach is a broadminded innovative teaching and learning method that emphasises the exploration of new ideas, perspectives and possibilities (Ioannidi and Malafantis, 2023; Rosseel and Anseel, 2022). It goes beyond traditional teaching and learning methods and encourages "thinking outside the box, challenge[s] established norms, and generate[s] unique insights" (Ioannidi and Malafantis, 2022: 24). The creative approach often involves collaboration of techniques such as visualisation and interactive programs; in addition, it combines different teaching and learning styles, integrating artistic and innovative practices (Gumula, 2020; Ismail, 2015; Taquette and Borges da Matta Souza, 2022).

Kanyopa (2023); Robson (2022) noted that creativity has the inherent ability to transcend cultural barriers, challenge stereotypes and promote empathy and understanding of diverse learning needs within school contexts. By engaging in creative processes, learners and teachers can express their unique perspectives, thoughts and experiences, fostering a sense of belonging and encouraging dialogue between diverse communities. Ismail (2015) and Root-Bernstein and Root-Bernstein (2017) state that creativity enhances inclusion and integration in schools by offering alternative and engaging methods of teaching and learning that accommodate diverse learning styles, backgrounds and abilities. Creativity also promotes sustainable inclusion and integration by empowering marginalised people. This has been evidenced in Booyens and Rogerson (2019) and Nompula (2011), that creativity offers a powerful tool for empowering marginalised communities by providing them with the means to express their unique perspectives and experiences. Through the creation and exhibition of visual artworks, "marginalized communities can gain visibility, recognition, and agency, contributing to their social and cultural inclusion and integration" (Booyens and Rogerson, 2019: 257). It also enables them to challenge stereotypes, reclaim their perspectives and explore alternative narratives, and helps them to challenge dominant discourses and create a space for marginalised voices.

Adonis *et al.* (2022) explain that the goal of creativity in an educational context is to uncover new knowledge, generate alternative solutions, and inspire fresh perspectives. It encourages innovation, embracing curiosity, imagination and new investigations. It also fosters a collaborative learning environment where learners work together on projects, problem-solving tasks and group activities (Snowball *et al.*, 2021). This implies that creativity ensures inclusion and integration of learners at schools by promoting active interaction and cooperation and celebrating diverse abilities, different backgrounds and strengths. Magagula *et al.* (2022) mention that creative activities create a positive and supportive teaching and learning environment in schools. Such activities provide opportunities for self-expression, self-confidence and emotional well-being (Guercini and Cova, 2022; Taquette and Borges da Matta Souza, 2022). This infers that, when learners feel safe, accepted and encouraged to express themselves creatively, it enhances their overall sense of belonging and inclusivity within the school community. Thus, by incorporating a creative approach in the education system, teachers can create inclusive and integrated learning environments that value diversity, support learners' strengths and promote collaboration and understanding among learners.

Methodology

Research methodology is a way of explaining the research process. It is a logical, systematic plan to find the solution for a research problem (Flick, 2020). Leavy (2022: 58) affirms that "methodology details a researcher's

approach to the research to ensure reliable, valid findings that address the aims and objectives of the study". According to Ismail (2015), the research methodology is a logical plan and procedure for the research that consists of certain steps towards data generation and analysis. In consequence, this study adopted a qualitative research approach. Kandel (2020) and Leavy (2022) affirm that the research approach interprets, describes and analyses subjects' experiences within the natural context. Data were collected from two selected primary schools in the KwaZulu-Natal province of South Africa over a period of two months. The schools were selected because both were, and still are, under resourced, with limited inclusion and integration practices in their functioning. Staff in both schools are struggling with implementation of the two philosophies (inclusion and integration) due to lack of skills and adequate training. These schools are township (rural) primary schools with a majority Black learner population, of whom most are from disadvantaged communities. To ensure confidentiality, these schools were assigned pseudonyms, namely School A and School B. Each school was represented by three teachers and three learners. School A comprised an Intermediate Phase sample, while School B comprised a Senior Phase sample.

A total of twelve (six females; six male) participants were selected by using the purposive and convenience sampling method. The sample comprised six teachers and six learners from the intermediate and senior phases. Written informed consent letters were given to the teacher participants, while the learners, being minors, were asked to give their parents their informed consent letter to give permission for their participation in the research process. All participants were Black and participated voluntarily. Ethical clearance also was given by the Ethics Committee of the University of KwaZulu-Natal. Participation was voluntary; however, time constraints did not permit all who volunteered to participate to participate in the research. We thus selected the twelve participants from the large group, with the participant profile presented in Table 1 below.

Table 1: Participant profile

Participant Pseudonym	School	Phase	Gender	Age Category
Teacher 1	A	Intermediate	M	30–35 years
Teacher 2	A	Intermediate	F	20–25 years
Teacher 3	A	Intermediate	F	35–40 years
Learner 1	A	Intermediate	F	9–11 years
Learner 2	A	Intermediate	M	9–11 years
Learner 3	A	Intermediate	M	9–11 years
Teacher 4	B	Senior	M	40–45 years
Teacher 5	B	Senior	M	45–50 years
Teacher 6	B	Senior	F	25–30 years
Learner 4	B	Senior	F	12–15 years
Learner 5	B	Senior	F	12–15 years
Learner 6	B	Senior	M	12–15 years

It was essential that we worked with teachers whose classes comprised of learners with diverse abilities. Some of these learners were identified to have learning barriers, and some were from vulnerable communities.

The study employed a visual art-based approach and focus group interviews to generate data. The focus group interview is a qualitative research approach that includes a small group of participants discussing a certain topic or issue in a structured and interactive setting (Dilshad and Latif, 2013). The focus group interview was selected because it was most suitable as it saved time and enabled us to obtain in-depth insights into participants' opinions, attitudes and experiences related to the creation of sustainable inclusion and integration in school by engaging creativity. The study also employed the visual art-based approach for the data collection process. This method allows participants to express their views by using pictures, drawings, memes or videos (Kanyopa and Mokhele-Makgalwa, 2024; Leavy, 2022). In this study, the visual art-based method was based on the creative visual participatory approach, where the participants used some recyclable materials from their lived-in environment to create teaching aids and learning materials to support inclusion and integration in schools. During the data generation process, participants were asked first to share their experiences and reflections on inclusion and integration in their schools. The purpose of this was to clarify any immediate questions about their experiences and observations and to encourage them to begin to think and reflect about inclusion and integration pedagogies. In addition, it helped us to build rapport in preparation for the focus group interviews.

Both the textual and creative visual data were analysed using thematic analysis to investigate the interrelated and iterative comparison of the data. The analysis began with interpretations of the raw data, after which we extensively

evaluated the data and developed codes and organised them into themes. These themes are significant because they constitute the foundations for creativity as an alternative approach for the sustainable inclusion and integration in schools.

Thematic Presentation of Findings and Discussion

This section presents the findings that emerged from participants' ideas, knowledge and innovation towards the contributions for the research on creativity as an alternative for sustainable inclusion and integration in schools. Textual data from the focus group interviews yielded three main themes: *creativity creates new possibilities for learning*, *creativity promotes empowerment and learner engagement*, and *creativity fosters innovative assessment and evaluation*. Furthermore, the creative visual approach provided a very good complementary view of these themes on creating knowledge on the researched issue.

Creativity creates new possibilities for learning

This is the first theme that emerged from the findings of the study. The theme corresponds with the first research objective of the study, which is to examine the role of creativity in promoting sustainable inclusion and integration in schools. During the focus group interviews, participants were asked to elaborate on the roles of creativity in the promotion of inclusion and integration, and their responses to this revealed potential that learners gained while engaging themselves in creativity activities. Participants revealed new possibilities for learning, such as flexibility in the classroom layout, visualisation of ideas and goals, as well as new opportunities for self-reflection. The following direct quotations from participants support this theme.

Teacher 1 from School A explained that:

“creativity gives our learners the freedom to explore and learn new things from us as teachers, also from each other.”

Teacher 4 from School B added that:

“Creativity with recyclable materials set as an alternative for the lack of resources situation in our school... our learners begin to see that they have limitless boundaries, as these approaches create a confidence in them.”

Teacher 2 from School A also mentioned that:

“It is sad to say that we are the living proof that the advancement of technologies in 21st Century does not benefit all... thus, with recycled creativity, our learners gain enthusiasm and energy even in their most difficult circumstances in their learning process.”

Teacher 6 from School B stated that:

“Even with advancement of technologies, people cannot solve their problem if they are not willing to be creative...and look at things differently.”

He added:

“With the creativity, and advanced technologies our learners will be able to do things that will significantly impact our societies”.

In explaining this theme visually, participants from both schools created teaching aids and learning materials that responded to the theme of creativity opening some new opportunities for learning. To support this, School A created a beehive by using some recycled materials, as shown in Figure 1.



Figure 1: Beehive created from egg trays

Participants from School A presented a beehive created from recycled materials such as egg trays and paper to explain new opportunities for learning gained from creativity. To explain this, Teacher 3 and the learners (1, 2 and 3) from School A said that their creativity can be viewed as a versatile teaching and learning aid that can be integrated into various subjects.

Teacher 3 from School A commented:

"As adults, it is easy to get caught up with our day-to-day life challenges and foil our ability to think abstractly and end up with dull ideas...but creativity by using recycled materials is the engaging way to enhance innovation."

Learner 1 from School A also mentioned:

"Mmm... this creativity exposed us into project-based learning, in which we learnt a lot from each other... now I am aware of what is queen bee, worker bees and drones (laughing)."

Learner 2 from School A mentioned:

"Creativity of this beehive improved my drawing skills...most of the pictures you see here, I drew them by hand."

Learner 3 from School A stated:

"While creating this, I learnt a lot about bees, as our teachers shared a lot of stories about bees, pollination and beekeeping skills."

To support this theme, School B also created vehicles of diverse modes of transportation to explain the new opportunities for learning derived from engaging creativity in the teaching and learning process. They used boxes, plastic bottles and cardboard to create visual art, as depicted in figures 2 and 3.

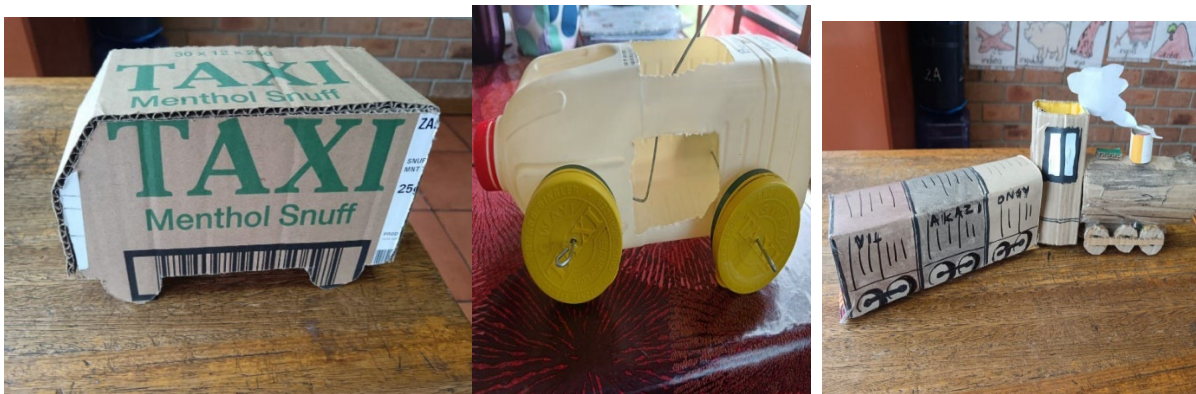


Figure 2: Land mode of transport (road and rail)



Figure 3: Air mode of transport

To explain their creative visual art, teachers and learners in School B commented as follows:

Teacher 5 from School B mentioned:

“Creativity by using recycled materials has opened up new opportunities for us and our learners to have instant teaching aids and learning materials, and allow us to see, think and do things in different ways.”

Learner 4 from School B also commented:

“Creativity by using recycled materials enabled us to apply our imagination to generate ideas; as a result, we managed to create these modes of transport.”

Learner 5 from School B affirmed that:

“New opportunities to learning involves the challenges that we encounter to understand new concepts and some broader perspectives... these always allow us to think hard, to be creative and imaginative.”

Learner 6 from School B stated:

“Creativity approach encourages the practical risks-taking to us learners and, also, it builds up our creative confidence.”

The findings from the comments above made by participants indicate the presence of new opportunities for learning when engaging learners in the creativity approach. This is also supported by Doron (2017) and Magagula *et al.* (2022), that creativity in the learning process enhances abilities to try new things, while allowing learners to think, plan and learn from each other. Ismail (2015) and Snowball *et al.* (2021) also mention that creativity has the potential to bridge divides and foster dialogue between learners of different abilities or backgrounds. Furthermore, it has been indicated that creativity in teaching and learning makes learners curious to learn new things and allows them to use their imagination (Lakkala and Óskarsdóttir, 2021; Robson, 2022). According to Li *et al.* (2022: 24), “inclusion and integration has become a new global agenda in education reforms since Salamanca statement in 1994”. However, Booyens and Rogerson (2019) and Ritter and Mostert (2017) explain that the concepts cannot be realised unless teachers implement creative teaching strategies that meet learners’ diverse needs. Thus, we agree that creativity is crucial in ensuring sustainable inclusion and integration in South African schools.

Creativity promotes empowerment and learner engagement

In today’s education, learner success is one of the central objectives in most education systems. Literature shows that learner engagement and empowerment play an essential role in learner achievement (Li *et al.*, 2022). Indeed, there is consensus that creativity promotes empowerment and engagement, as the two aspects have been indicated to be the contributors to reinforcing inclusive and integrative learning at schools. Additionally, the creativity approach encourages active interaction and collaboration between learners from diverse backgrounds (Guercini and Cova, 2022; Gumula, 2020). The active engagement of learners in tasks facilitates the exchange of ideas, experiences, and their cultural practices. Hence, by engaging learners in creative projects, they can build relationships, develop mutual respect and break down barriers, ultimately fostering a sense of unity and shared responsibility for sustainable inclusion and integration in their learning environment. The following points were stressed by the participants in explaining this theme.

Teacher 2 said that:

“Creativity with recycled materials empowers our learners to have a divergent thinking, which is the capacity to generate multiple alternatives and solutions towards the problem.”

Teacher 5 also commented that:

“Engaging learners in the creativity develops their confidence and sense of responsibilities.”

Teacher 6 stated that:

“To be creative is essential to living a fulfilled and successful life, and it is valued in all spheres of life, including workplaces.”

Teacher 1 also pointed out that:

“Creativity benefits us by being able to deal with our physical, psychological and health issues... when facing difficulties, one can even lower the level of stress and aggression, while finding appropriate solutions to overcome it.”

To support this theme visually, Learner 4 made a musical instrument called a shaker (Figure 4) by using a recycled bottle and mentioned that the instrument is a powerful tool to engage learners in music, arts and drama lessons.



Figure 4: A musical instrument (shaker)

Additionally, learners (1, 2 and 3) created an interactive chart of food groups by using paper and pictures of foods from newspapers (Figure 5), which they mentioned is a powerful tool for promoting and engaging learners in healthy eating.

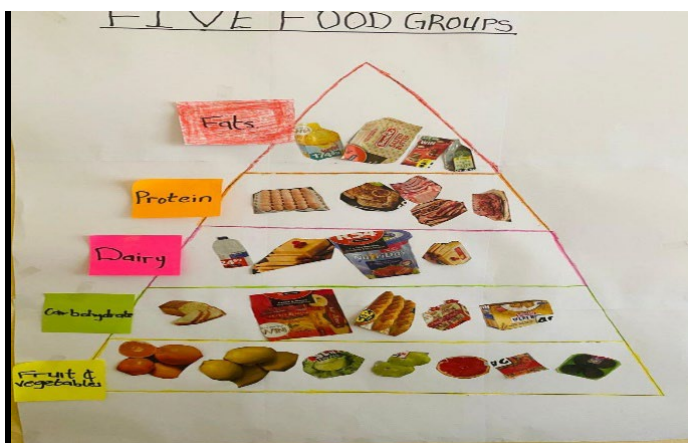


Figure 5: Healthy food chart

To explain their creative visual art, learners commented:

Learner 4 said that:

“I made a shaker out of recyclable materials. I love music, and it is an amazing thing. Creativity in inclusive classrooms is important for several reasons... Firstly, creativity has the power to engage and inspire learners of all abilities and backgrounds. It provides empowerment of outlet for self-expression and allows us to develop our unique talents and skills. Secondly,

creativity promotes social interaction and collaboration. In inclusive settings, it encourages us to work together, fostering a sense of belonging to our communities.”

Regarding the food chart, Learner 2 said that:

“Creativity on the food chart empowered us to explore on our diverse learning styles and abilities...it ensured that every learner was connected with the material effectively.”

Learner 3 continued:

“when creating this visual aid... visual learners benefited from the colourful and appealing design, while kinaesthetic ones were actively participating by arranging food items into their respective groups. Auditory learners had the opportunity to discuss and debate about food.”

The participants' comments above show that creativity promotes active engagement and empowerment in the school environment. Ioannidi and Malafantis (2023) and Rosseel and Anseel (2022) confirm that creativity can be considered the key to achieving sustainable inclusion and integration, because the concept mainly focuses on the promotion of human rights through the empowerment and active engagement of each one involved. Generally, creativity through the use of recycled materials is the most effective way to give all learners a fair and equal opportunity to learn, share their ideas and imagination and develop the skills they need to thrive (Booyens and Rogerson, 2019; Gal, 2023; Ritter and Mostert, 2017). Therefore, with the empowerment and active engagement of learners of all backgrounds, the creativity approach enhances collaboration that positively impacts the learning, growth and development of the learners in their learning environment.

Creativity fosters innovative assessment and evaluation

Schools are saddled with multi-faceted challenges regarding assessing and evaluating learners with diverse learning needs. Consequently, the creativity approach currently pushes schools to adopt the best managed innovative strategies to provide fair assessment and evaluation for each learner at school. To that effect, Adonis *et al.* (2022) and Anitha and Bharathi (2023) affirm that creativity allows teachers to understand their learners' background, strengths, weaknesses, interests and goals, which helps them to tailor their assessment and evaluation methods to suit learners' needs and preferences. Furthermore, Magagula *et al.* (2022) mention that creativity creates appropriate assessment and evaluation methods that align with learning styles, learning objectives, contents, and the contexts. Through creativity, teachers can use various formats of assessment and evaluation, such as oral, written, visual, art or performance-based, to allow learners to demonstrate their learning in different ways (Root-Bernstein and Root-Bernstein, 2017). Participants made the following statements to support this theme.

Teacher 1 commented:

“Creativity help us to choose appropriate assessment and evaluation methods...which offer multiple opportunities to the learners to show what they know and can do.”

Teacher 3 also pointed out that:

“Creativity provides learners with a clear assessment criteria and expectations that communicate what the learner needs to achieve and how us as teachers are going to evaluate their performances.”

Teacher 5 stressed that:

“A creative approach allows for diverse and non-traditional forms of assessment and evaluation that go beyond the classroom contexts... with creativity, learners can demonstrate their understanding and skills through creative projects, performances, portfolios and presentations. This accommodates different learning styles and provides a more inclusive and integrative assessment and evaluation frameworks.”

To support this theme visually, School B made a rewards chart by using colourful paper (Figure 6), which teachers can use to assess learners' behaviours in the classroom.

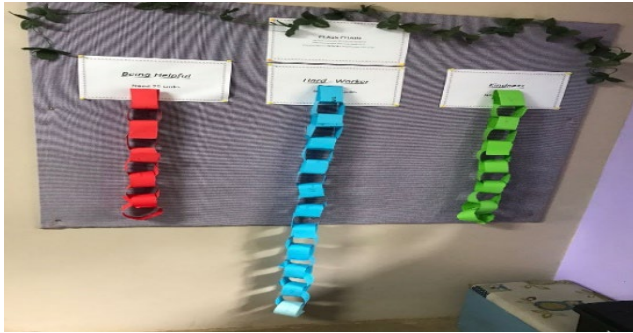


Figure 6: Reward chart

In addition, teachers used a jar that contained ice-cream sticks with learners' names on them that were used to ensure active participation of each learner in the classroom.

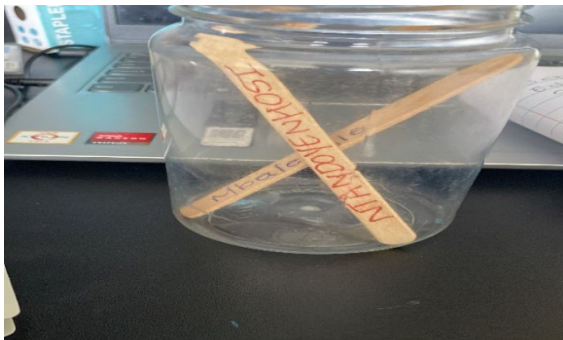


Figure 7: Name-sticks jar

To explain their creativity, Learner 5 from School B said that:

“teachers can use a named stick to assess each learner’s understanding of the contents in the classroom simply by calling out names of different learners...this ensured active participation of each learner during the lessons.”

Learner 6 also pointed out that:

“Creativity for this reward charts enhances learners’ positive behaviour in the classrooms.”

Teacher 4 added:

“Reward charts give learners a visual presentation of their behaviour and responsibilities, which help us to assess, evaluate and provide appropriate guidance and set clear expectations.”

School A also created a fun number board by using a recycled television (TV) box (Figure 8) and made pom-poms using tissue paper and food colouring. They used plastic cool drink bottle lids and covered them with coloured paper.



Figure 8: Number board for mathematics skills

In addition, School A again made an educative game that assesses learners' ability to match the sounds to the picture, which was made from the recycled boxes and plastic bottle lids (Figure 9).



Figure 9: Board for sound matching skills

To support this creative visual art, Learner 1 said that:

"With the fun number board, teachers can assess learners by writing the sums on it and wipe it out... also, the board can be used in various activities for assessment, such as colour matching, counting from 1 to 20, addition and subtraction, even number from 1–20, or ordering numbers and filling in missing numbers."

Learner 3 also mentioned that:

"Teachers can assess learners by using this visual creative art, as learners will be able to use the picture to help them distinguish what the beginning sounds are for these specific words."

Drawing from the comments above, creativity can be harnessed to do assessments and evaluation to celebrate diverse perspectives and learning abilities in schools. By incorporating the creativity approach to innovate methods of assessment and evaluations, schools can create an inclusive and integrative learning environment that values and respects the background, interests and preferences of all learners (Adonis *et al.*, 2022; Anitha and Bharathi, 2023). Creativity approaches often help teachers to assess and evaluate learners' problem-solving skills, critical thinking and innovation (Cropley, 2023; Doron, 2017; Guercini and Cova, 2022). Thus, when engaging in innovative assessment and evaluation, learners are encouraged to think independently, integrate inclusive mindsets to explore alternative solutions, and apply their imagination and creativity to real-world challenges.

Conclusion

Creative approaches in the teaching and learning context can yield valuable and transformative motives towards sustainable inclusion and integration. As mentioned in Anitha and Bharathi (2023), creativity allows teachers to explore possibilities and opportunities beyond the constraints of traditional teaching methodologies. Creativity can lead to breakthroughs, paradigm shifts and the development of skills, concepts and practices in teaching and learning processes (Ritter and Mostert, 2017; Rosseel and Anseel, 2022). This study offers some evidence for the creativity approach, particularly in the teaching and learning process, as a relevant innovative strategy for sustainable inclusion and integration in schools. The originality of the work lies in highlighting creativity done through the use of recycled materials as a dynamic component of the creativity approach and practices within school contexts. It is worth mentioning that this type of creativity aligns with knowledge in all subjects, for example, mathematics, language, natural sciences, etc. Indeed, creativity with recycled material allows for the incorporation of various teaching and learning methods, whereby learners with different strengths in different subjects and preferences can actively participate in and contribute to the learning process. A strength of this study is that it engaged innovative methods that motivate teachers and learners to think out of the box and embrace the idea of creative teaching and learning. We believe that implementing creativity through the use of recyclable materials creates a healthier relationship between teachers and learners in school, as this method influences the collaboration and cooperation of everyone involved. Another strength is that this study triggered the learners' imagination by providing them with a good opportunity for extending their innovation and creative skills through the reuse of waste products. Nevertheless, the weakness of this study is that it focused only on primary schools. Consequently, this weakness affords a research gap for future studies to further explore creative art-based approaches in other educational contexts.

References

- Adonis, C., Sobane, K. and Hongoro, C. 2022. Addressing Economic, Social and Environmental Challenges in South Africa. In: Hongoro, C., Adonis, C. and Sobane, K. eds. *Innovation for Inclusive Development and Transformation in South Africa*. Cape Town: AOSIS Publishers, 1-14.
- Anitha, V. and Bharathi, V. 2023. STEAM Education, a Multidimensional Approach to Foster Creativity and Innovation among 21st Century Learners. In: Prakash S., Munniammal M. A, Sundar N., Thangavel K. and Raja Kumar S. eds. *Education 5.0: Revolutionizing Learning for the Future*. Madurai: Internal Quality Assurance Cell (IQAC) 241-245.
- Anyim, W. O. 2021. Sustainable Development Goal on Quality Education: A Review of E-Learning Resources and Pedagogy in the University System. Available: https://www.researchgate.net/profile/Wisdom-Anyim/publication/352261611_Sustainable_Development_Goal_on_Quality_Education_A_Review_of_E-Learning_Resources_and_Pedagogy_in_the_University_System (Accessed 17 March 2023).
- Booyens, I. and Rogerson, C. M. 2019. Creative Tourism: South African Township Explorations. *Tourism Review*, 74(2): 256-267.
- Cropley, D. H. 2023. Making an Impact: Fit-for-Purpose Creativity Assessment. In: Reisman F. K. ed. *Unpacking Creativity: Culture, Innovation, and Motivation in Global Contexts*. London, UK: KIE Publication, 154-174.
- Department of Education (South Africa). 2001. Education White Paper on Special Needs Education: Building an Inclusive Education and Training System. Available: https://www.vvob.org/files/publicaties/rsa_education_white_paper_6.pdf (Accessed 15 May 2023).
- Dilshad, R. M. and Latif, M. I. 2013. Focus Group Interview as a Tool for Qualitative Research: An analysis. *Pakistan Journal of Social Sciences*, 33(1): 191-198.
- Doron, E. 2017. Fostering Creativity in School Aged Children through Perspective Taking and Visual Media Based Short Term Intervention Program. *Thinking Skills and Creativity*, 23: 150-160.
- Flick, U. 2020. *Introducing Research Methodology: Thinking Your Way through Your Research Project*. London: Sage.
- Gal, A. 2023. From Recycling to Sustainability Principles: The Perceptions of Undergraduate Students Studying Early Childhood Education of an Education for Sustainability Course. *International Journal of Sustainability in Higher Education*, 24(5): 1082-1104.
- Gamoran, A. and An, B. P. 2016. Effects of School Segregation and School Resources in a Changing Policy Context. *Educational Evaluation and Policy Analysis*, 38(1): 43-64.
- Guercini, S. and Cova, B. 2022. How Innovation Nurtures Well-Being in Enthusiast Communities. *Innovation*, 24(4): 522-551.
- Gumula, J. 2020. Creativity Training in Organizations: A Ready-to-Implement Concept. *Gruppe Interaktion. Organisation*, 51(1): 95-102.
- Ioannidi, V. and Malafantis, K. D. 2022. Inclusive Education and Inclusive School Development: A Key-Area for Sustainability and Teacher Skills. *European Journal of Social Sciences Studies*, 8(1): 1-15.
- Ioannidi, V. and Malafantis, K. D. 2023. Inclusive Education and Creative Learning Styles: International Opportunities and Challenges. *European Journal of Literature, Language and Linguistics Studies*, 7(1): 77-86.
- Ismail, T. 2015. The Influence of Competitive Pressure on Innovative Creativity. *Academy of Strategic Management Journal*, 14(2): 117-127.
- Jacobs, M. K. and Govender, S. 2020. Evaluation of the Implementation of Education White Paper 6 in Selected Full-Service Schools in KwaZulu-Natal. *Journal of Social Sciences and Humanities*, 17(3): 86-103.
- Kandel, B. 2020. Qualitative versus Quantitative Research. *Journal of Product Innovation Management*, 32(5): 1-5.

- Kanyopa, T. J. 2022. Understanding and Enhancing Learner Integration in a Selected Ex-Model C School. Doctoral Dissertation, University of KwaZulu-Natal.
- Kanyopa, T. J. 2023. Exclusion, Diversity and Inclusion. In: Hlalele, D. and Makoelle, T. M. eds. *Inclusion in Southern African Education*. Cham: Springer, 1-10.
- Kanyopa, T. J. and Mokhele-Makgalwa, M. L. 2024. The Understanding of Psychological Challenges Facing South African School Learners in 21st century: A Visual Explanatory Approach. *Ebangi Journal of Social Sciences and Humanities*, 21(2): 270-284.
- Kozibroda, L. V., Kruhlyk, O. P., Zhuravlova, L. S. and Chupakhina, S. V. 2020. Practice and Innovations of Inclusive Education at School. *International Journal of Higher Education*, 9(7): 176-186.
- Lakkala, S. and Óskarsdóttir, E. 2021. Enhancing Sustainable Inclusive Education. *Sustainability*, 13(14): 70-98.
- Leavy, P. 2020. *Method Meets Art: Arts-based Research Practice*. London: Guilford Publications.
- Leavy, P. 2022. *Research Design: Quantitative, Qualitative, Mixed Methods, Arts-Based, and Community-Based Participatory Research Approaches*. Atlanta: Guilford Publications.
- Li, D., Gavaldà, J. M. S. and Badia Martín, M. 2022. Listening to Students' Voices on Inclusive Teaching Strategies in Chinese Primary Schools. *International Journal of Chinese Education*, 11(2): 22-45.
- Magagula, S., Mugovhani, N. G. and Yende, S. J. 2022. Challenges Encountered in the Enhancement and Optimal Teaching and Learning of the Creative Arts Subject in South Africa. *African Journal of Inter/Multidisciplinary Studies*, 4(1): 373-383.
- Naidoo, C. 2018. Transitioning South Africa's Finance System towards Sustainability. In: Mohamed, N. ed. *Sustainability Transitions in South Africa*. London: Routledge, 101-123.
- Nompula, Y. 2011. Valorising the Voice of the Marginalised: Exploring the Value of African Music in Education. *South African Journal of Education*, 31(3): 369-380.
- Pandor, N. 2018. Contested Meanings of Transformation in Higher Education in Post-Apartheid South Africa. Doctoral Dissertation, University of Pretoria.
- Ritter, S. M. and Mostert, N. 2017. Enhancement of Creative Thinking Skills Using a Cognitive-based Creativity Training. *Journal of Cognitive Enhancement*, 1: 243-253.
- Robson, I. 2022. Reflection, Reflexivity and Creative Writing. In: Robson, I. ed. *The Reflective Leader*. Leeds: Emerald Publishing Limited, 69-87.
- Root-Bernstein, R. and Root-Bernstein, M. 2017. People, Passions, Problems: The Role of Creative Exemplars in Teaching for Creativity. In: Beghetto, R. A. and Sriraman, B. eds. *Creative Contradictions in Education: Cross Disciplinary Paradoxes and Perspectives*. Switzerland: Springer International Publishing, 143-164.
- Rosseel, J. and Anseel, F. 2022. When Reflection Hinders Creative Problem-Solving: A Test of Alternative Reflection Strategies. *Journal of Business and Psychology*, 37(2): 429-441.
- Snowball, J., Tarentaal, D. and Sapsed, J. 2021. Innovation and Diversity in the Digital Cultural and Creative Industries. *Journal of Cultural Economics*, 45: 705-733.
- Taquette, S. R. and Borges da Matta Souza, L. M. 2022. Ethical Dilemmas in Qualitative Research: A Critical Literature Review. *International Journal of Qualitative Methods*, 21(1): 16-41.
- Walton, E. and Engelbrecht, P. 2022. Inclusive Education in South Africa: Path Dependencies and Emergences. Available: <https://www.tandfonline.com/doi/pdf/10.1080/13603116.2022.2061608> (Accessed 18 May 2023).
- Zoch, M. 2017. "It's Important for them to Know Who They Are": Teachers' Efforts to Sustain Students' Cultural Competence in an Age of High-Stakes Testing. *Urban Education*, 52(5): 610-636.