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TEACHERS' SUCCESSES IN LEADING CURRICULUM REPURPOSING FOR SUSTAINABLE LIVELIHOODS THROUGH SCHOOL FOOD GARDENS

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Abstract
In the face of persistent challenges such as food insecurity, youth unemployment, and environmental degradation, curriculum repurposing for sustainable livelihoods has become increasingly vital in South Africa. Traditional school curricula often fail to reflect learners' lived realities, limiting their engagement with local sustainability issues. This study aimed to explore teachers' successes in leading curriculum repurposing through school food gardens as a practical intervention for education for sustainable development. Anchored in a transformative paradigm, the study adopted a Participatory Action Learning and Action Research design and employed photovoice, digital storytelling, and semi-structured interviews with six purposively selected teachers actively involved in school garden initiatives. Thematic analysis guided the interpretation of the data. Findings revealed six key areas of success: enhanced food security, improved nutrition education, development of entrepreneurship and small-scale farming skills, strengthened collaboration across schools, and improved academic performance, particularly in Agricultural Sciences and Environmental Education. These outcomes demonstrate how teachers successfully bridged the gap between abstract curriculum content and real-life sustainability practices, empowering learners as contributors to community resilience. The study recommends formal integration of school gardens into the curriculum, investing in teacher development, enhancing infrastructural support, fostering community partnerships, and scaling best practices through collaboration. Ultimately, the study concludes that school food gardens represent a transformative model for curriculum leadership and a powerful tool for advancing sustainable livelihoods in resource-constrained contexts.

Keywords: curriculum repurposing, education for sustainable development, entrepreneurship, nutrition education, school food gardens, sustainable livelihoods, teacher leadership

Introduction

Globally and nationally, there has been a growing emphasis on aligning education with sustainable development imperatives, as reflected in frameworks such as the Sustainable Development Goals (SDGs), Education for Sustainable Development (ESD), and South Africa's Curriculum and Assessment Policy Statement (CAPS). ESD promotes inclusive, lifelong learning that empowers individuals to address complex social, environmental, and economic challenges (United Nations Educational, Scientific and Cultural Organization (UNESCO), 2022). It is central to transforming societies toward sustainability by equipping learners with the knowledge, values, and skills necessary for just and resilient futures (Didham & Paul, 2015; Glavič, 2020). In this context, education systems are increasingly being urged to integrate real-world issues such as climate change, food

insecurity, and unemployment into curricular content to make learning relevant and transformative. In South Africa, repurposing the curriculum to incorporate sustainability themes is essential to addressing socio-economic disparities and promoting ecological literacy. School food gardens have emerged as effective tools for experiential, interdisciplinary learning that cultivates agricultural, nutritional, and entrepreneurial knowledge while enhancing critical thinking and environmental stewardship (Buthelezi, 2024; Maponya et al., 2021). Teachers play a pivotal role as curriculum leaders and change agents by adapting educational content to local realities and implementing community-based initiatives such as school gardens (Venketsamy & Hu, 2024; Walshe et al., 2024). Existing literature affirm that school gardening enhances learners' ecological awareness, life skills, academic engagement, and well-being, offering a practical means of connecting classroom theory to real-life sustainability practices (Papadopoulou et al., 2020; Takkouch, 2025).

Despite the inclusion of sustainability themes in South Africa's national curriculum, there remains a persistent disconnect between formal curriculum content and practical, livelihood-oriented initiatives such as school food gardens. These gardens are often intended to support both learning and nutrition, yet their educational potential is frequently underutilised due to limited resources, rigid curricula, and learner perceptions that associate gardening with punishment (Buthelezi, 2024; Rapanyane, 2024). While school gardens present opportunities for experiential learning in environmental awareness, nutrition, and entrepreneurship (Rich & Ardoin, 2014; Papadopoulou, 2020), they are still primarily used for food production rather than integrated into teaching practice. Systemic barriers such as insufficient teacher training, centralised curriculum design, and a lack of structured policy frameworks further constrain their effectiveness in advancing education for sustainable development (Tas, 2022; Pramjeeth et al., 2023; Damoah & Omodan, 2022). Moreover, teachers are often positioned as implementers rather than leaders in curriculum innovation, limiting their capacity to adapt content to local sustainability needs (Bauer, 2022; Kanosvamhira et al., 2023). This top-down approach creates a mismatch between policy rhetoric and classroom realities, especially in under-resourced schools where educators lack the autonomy and support to lead transformative initiatives (Bopape, 2022; Uleanya, 2024). However, emerging evidence suggests that where teachers are empowered, they have successfully repurposed the curriculum through school gardens, embedding sustainability education into practice, and addressing local food security (Nkomo, 2023; Malatji et al., 2023). Thus, this study seeks to explore the often-overlooked successes of teachers in leading curriculum repurposing for sustainable outcomes through school food gardens.

Despite growing interest in education for sustainable development (ESD), there is a notable lack of empirical research focusing on teachers' successes, rather than challenges, in leading curriculum repurposing for sustainability. While the South African curriculum contains rich sustainability content, most literature emphasise implementation barriers such as rigid curricula, limited resources, and insufficient training (Schudel et al., 2021; Chuene & Teane, 2024). Studies that document teacher-led innovations, including instructional adaptations and community initiatives like school gardens, remain limited (Bessong & Ogina, 2022; Malatji et al., 2023). Moreover, existing research tends to highlight obstacles to implementing school food gardens, such as learner resistance and

resource scarcity, rather than showcasing effective pedagogical practices and leadership strategies (Buthelezi, 2024; Walshe et al., 2024). As a result, the potential of teacher-driven curriculum innovation to promote sustainable livelihoods through garden-based education remains underexplored. There is a pressing need to understand how teachers adapt curriculum content and assume leadership roles in embedding practical sustainability practices, particularly in under-resourced contexts (Pramjeeth et al., 2023; Van der Westhuizen, 2019; Legodu, 2018).

Showcasing successful teacher-led curriculum transformations, such as school food gardens, offers valuable models for broader educational reform by illustrating how educators can drive practical, community-based responses to sustainability challenges (Bopape, 2022). Empowering teachers as leaders promotes school-wide sustainability, experiential learning, and community development, particularly in addressing poverty, food insecurity, and unemployment through environmentally conscious education (Rich & Ardoin, 2014; Kupolati et al., 2015). However, limited resources, weak ESD frameworks, and inadequate training hinder impact (Olawumi & Mavuso, 2024; Lotz-Sisitka, 2011). Integrating African philosophies like Ubuntu and supporting teacher agency through curriculum reform and professional development can enhance relevance and impact (Gwekwerere & Shumba, 2021; Kibuka-Sebitosi, 2015). Teacher leadership, grounded in experiential learning, not only aligns with SDG targets but also fosters community engagement and livelihood development (Pramjeeth et al., 2023). These findings can inform policy, improve teacher training, and support the replication of best practices in similar educational contexts, reinforcing the pivotal role of teacher agency in sustainable education (Baroudi, 2023; Song & Rizal, 2023).

Research Aim

To explore the successes that teachers experience when leading the repurposing of curriculum for sustainable livelihoods using the school food garden.

Methodology

This study used a transformative research paradigm, which is especially appropriate for studies that aim to overcome structural injustices, elevate underrepresented perspectives, and address social justice issues (Mertens, 2025). This approach prioritises the co-creation of knowledge through collaborative dialogue and participation, valuing the lived experiences and knowledge systems of groups often marginalised in dominant narratives. This paradigm acknowledges the lived experiences and knowledge systems of people who are frequently left out of the mainstream discourse and places an emphasis on the co-construction of knowledge through participation and debate practices (Damons & Wood, 2020). In order to critically explore the teachers' successes in leading curriculum repurposing for sustainable livelihoods through school food gardens, this study used a transformative paradigm. Participatory engagement served as the foundation for the research process, where meaning was developed by ongoing participant interaction and a growing comprehension of context-specific practices.

This study employed a Participatory Action Learning and Action Research (PALAR) design. It promotes conducting research with participants rather than on them, fostering democratic participation and shared ownership of knowledge production (Zuber-Skerritt,

2018). Grounded in dialogue, reflection, and mutual learning principles, PALAR facilitates collaborative inquiry that values experiential knowledge and promotes social transformation (Wood, 2019). In this context, PALAR enabled meaningful engagement between university researchers and teachers, encouraging joint problem-solving and continuous reflection. Its transformative orientation, emphasising purposeful action, iterative learning, and socially just outcomes, supported critical thinking, deepened contextual understanding, and facilitated practical change (Zuber-Skerritt & Wood, 2020). Through this approach, the study uncovered and nurtured teacher leadership in repurposing the curriculum to promote sustainable livelihoods via school food gardens, thereby linking pedagogical innovation with broader social impact (Damons & Wood, 2020). The target population comprised teacher leaders from schools in Hoedspruit who actively integrated school food gardens into their teaching as a strategy for curriculum repurposing. A purposive sampling technique was employed to intentionally select participants with direct, relevant experience of the phenomenon under investigation, a common approach in qualitative research aimed at gaining rich, context-specific insights (Palinkas et al., 2015; Etikan, Musa, & Alkassim, 2016). This method allowed the researcher to identify six teachers who demonstrated active engagement with school garden initiatives and were well-positioned to offer in-depth perspectives on curriculum transformation and sustainable education practices within their school contexts.

To explore the successes of teachers in repurposing the curriculum through school food gardens, researchers employed a combination of photovoice, digital storytelling, and semi-structured interviews. Photovoice empowered participants to document their teaching practices through images and use these visuals as catalysts for reflective group dialogue, effectively revealing how gardens were woven into curriculum delivery (Walker & Mathebula, 2020). Digital storytelling provided a platform for teachers to craft multimedia narratives that illustrated their leadership in transforming traditional pedagogy into experiential, garden-based learning (Kato Nabirye, 2025). These participatory visual methods highlighted innovative practices such as integrating science, life skills, and nutrition education into hands-on gardening tasks, demonstrating how teachers responded to contextual challenges with creativity and agency (Lam et al., 2019). The flexible and dialogic nature of the data collection process, conducted at times convenient to participants and transcribed manually, ensured rich engagement and authentic representation of teacher-led curriculum innovation.

PALAR's emphasis on iterative reflection makes data collection and analysis continuous and integrative (Wood, 2019). In line with this approach, the study employed photovoice, digital storytelling, and semi-structured interviews to explore teachers' successes in repurposing the curriculum for sustainable livelihoods through school food gardens. These participatory methods enabled teachers to articulate their successes of curriculum repurposing and leadership in contextually meaningful ways (Leach & Bradbury, 2024). All data were manually transcribed to ensure deep engagement with participants' voices. Consistent with qualitative analysis principles outlined by Nowell et al. (2017) and Tracy and Hinrichs (2017), multiple rounds of transcript review were conducted to ensure analytical rigour. Thematic analysis followed Braun and Clarke's (2006) six-phase model: familiarisation, initial coding, theme generation, review, definition, and write-up, enabling a systematic interpretation of how teacher leaders successfully transformed abstract

sustainability goals into concrete, place-based learning experiences. This process highlighted the teachers' pedagogical creativity and their capacity to lead curriculum change aligned with community development and sustainable livelihoods.

Findings

1. Food security

Participants indicated that teachers leading school food gardens effectively demonstrated how the initiative contributes to food security, benefiting not only learners but also teachers and the broader community. They expressed pride in the gardens' role in providing nutritious food, creating business opportunities, and imparting practical agricultural skills to support sustainable livelihoods. Photovoice Participant Five shared how the garden yields tangible food resources: "*If you can look at this picture, I am having the vegetables in my hands*." She further elaborated on how the produce is shared within the school: "*Sometimes we just want to give learners vegetables being cooked per spoon, then we give the kitchen, then we feed the whole school." "Sometimes we do give the learners who worked in the garden. When they go home, we just give them vegetables so that they can go home and feed their families." "We say, no, we just help the community. And the learners, when they go home, they make their own gardens, and they know how many leaves are going to sell for R5. Which means they have something to eat at home. And they can cook and eat, and they can sell and get money." "Even their parents, they are happy to see their children coming with 'morogo' (spinach)*. Photovoice Participant One highlighted the impact on learner nutrition: "At school, there is no hunger. To put food on the table and even sell and get some money to help their families." Digital Stories Participant One emphasized the entrepreneurial skills learners gain: "*They are benefiting. Sometimes they know they cook, and the learners enjoy the vegetables. Sometimes we sell; they know that in business there are expenditures and incomes. The important thing is to make profit. Watering, fertilising, harvesting. Now we have harvested the onions and beetroot, which we sold. They know that this is the ability because they are making money*." Interview Participant Six described how food from the garden helps vulnerable learners and families:

> *Our children, those that are coming from poor backgrounds, are able to harvest vegetables, and we give them free of charge so that they go and eat at home. … The parents are able to say thank you after giving them vegetables, and they take them home to cook and enjoy with their family members…. The teachers also there is a day that we cook and dish for them, and the teachers enjoy 'morogo' from our own school food garden…. We find that in our garden, it gave us an opportunity. Right now, when we're planting vegetables, we are able to supply vegetables to our own households also…. After school, we are able to go home with vegetables and cook for our families also…. We do not lack vegetables in our houses and families. We also say that those who are suffering, we take them and work with them in the garden. When we are done, we give them plastic bags of vegetables to take home and give their families to cook…. In the families where there are funerals or a person is very sick, we harvest and donate to the family. They appreciate it because they did not expect us to come and give them vegetables.*

2. Nutrition education

Nutrition education emerged as a key success in teachers' leadership of curriculum repurposing through school food gardens. Participants highlighted how school gardens provide not only practical learning but also promote healthy eating habits, support household food security, and even offer natural remedies for common illnesses. Photovoice Participant One emphasised the role of gardens in promoting healthy living: "*A school must have a garden to show that there is life … must eat healthy food*." Photovoice Participant Five added that school gardens contribute to both food security and health: "… *which means at home they have got something to eat without using money. In the school, they benefit by eating green vegetables; the learners can fight some diseases*." Interview Participant One echoed similar sentiments, focusing on balanced diets for learners: "… *fresh vegetables to cook for our learners, and be able to balance the diet, so that the learners can be healthy*." This participant also highlighted the broader community benefit: "... *People are encouraged to eat healthy… also assisting the community as a whole*." Interview Participant Six shared how herbs from the garden are used for medicinal purposes: "*We have herbs like mint. When a child is having flu, we take that mint and wash it thoroughly. We add it to the water in the bottle. When the child drinks that water, that mint flavour is able to open the blocked nose, and then the child starts to breathe better*." This participant further explained the integration of herbs into meals: "… *Moving forward, at the school food garden we have an herb that you can use in drinking tea and also add to rice, also in the pudding. All of them are very important in our lives when we are using them in our food*."

3. Entrepreneurship skills

Participants posited that a key success in repurposing the curriculum through school food gardens lies in equipping learners with entrepreneurial skills that empower them to sustain themselves and contribute economically to their communities. Participant One highlighted how the school garden initiative instills business acumen in learners: "*Learners at the garden, when they plant, they end up selling… able to support their families, and they can increase or expand the garden that they have. They learn the difference between being a commercial farmer and a subsistence farmer*." Further elaborating on curriculum integration, Participant One also explained how formal teaching is aligned with real-world marketing practices: "*In Grade 12, we teach the marketing channels, and learners already know how to market the products, direct and indirect*." Participant Four supported this by noting the learners' active participation in trading and community engagement: "*After they harvested their crops, they go and sell. That brings in the concept of trading; they exchange with people from the community and receive money*." From a more practical and social standpoint, Participant Two illustrated the immediate impact on household nutrition and micro-sales: "*For the consumption of their family or neighbours, even one can come with R10, and they give them a package, something to put on the table*."

Participant Six emphasised how entrepreneurship is practiced sustainably, linking school gardens to real economic value: "*We are able to harvest vegetables and take them where old people collect their grant. We arrange small bunches and leave them with someone to sell for us. We come back to school to teach. R10 each. We are able to make about R1500, which we take to the bank*." They also shared how the garden's reach has grown

beyond the school: "*Our vegetable garden is inviting people from far away who come to the school to buy*." Moreover, learners are exposed to the concept of profit-making. As Participant Six explained, "*When they buy from us for R100, they can make R200 or R250. They are able to make a profit of R150. When we plant mielies and it is time to harvest, we sell to parents and community members, and the little amount we get is deposited into the bank*." The funds generated are not only reinvested into the school garden but are also used to meet urgent needs, as Participant Six pointed out: "*When there is a need for money at school, we go there, withdraw, and use the money. Not long ago, we assisted the principal with money to pay the volunteer clerk, R1000 from the vegetable account, so she could also support her family*." Additionally, the garden fosters empathy and community spirit. Participant Six explained how they support those in need: "*When people come to buy and we realise some are not buying because they don't have money, we give them 'morogo' for free*." Participant One concluded by emphasising the empowerment and opportunity that learners derive from the initiative: "*Already they know the challenges... There will be opportunities. An opportunity - you must grab it. Don't let it slip away." Participant One shared the pride and motivation learners gain from their garden income: "This garden makes them happy… they use the money to buy their uniform*."

4. Small-scale farming

Participants highlighted how the integration of small-scale farming into the school curriculum equips learners with practical agricultural skills and fosters entrepreneurial thinking. Teachers described school food gardens not only as educational tools but also as platforms for sustainable livelihoods. Participant One emphasised the economic and life-sustaining potential of agriculture: "*Agriculture is life, and it gives life. Agriculture is a business on its own. It makes a lot of profit… Learners can start a business because they know in business there are challenges, so they know that if they encounter challenges, they will be able to implement alternatives*." She further noted the widespread acquisition of gardening skills among learners: "…*learners from Grade 8, each and every learner, have gardening skills*." Participant Two observed the learners' ability to transfer acquired knowledge to their home environments, promoting small-scale farming at household level: "*They even, just because of the skill, manage to do their own garden that is small scale at their home*." He also shared traditional techniques learners use to preserve seeds: "*And then keeping the seeds. We normally take the seeds and keep them in the bottle [with] a little bit of wood ashes and paraffin so that they will stay for a longer time until the next season*." Participant Four reflected on the added value of school-based farming compared to traditional home practices: "…*the way they irrigate [at school] is not the same as the way they did in their homes. So, the garden brings a skill to the learners in terms of how they should farm at home*." Photovoice Participant Five described learners' engagement and the tangible outcomes of their labour: "*My learners enjoy ploughing… they enjoy irrigating… After six weeks we harvest 'morogo,' then each learner will have a small plastic bag that the learner will carry to their parents*." From a digital story, Participant Two reiterated learners' growing passion for farming and their practical understanding of agricultural science: "*Our learners develop love for farming and the love for planting… to know how to plant and also have their own gardens at home. And then the other thing is to know that we have different types of soil, and they are able to see them practically*."

5. Collaboration skills

Collaboration emerged as a crucial success factor in leading curriculum repurposing through school food gardens. Teachers shared experiences of learning from neighbouring schools and offering guidance to others, demonstrating strong inter-school partnerships. Participant One reflected on how their school benefited from the example of a neighbouring secondary school: "*We were assisted by School D Secondary School. We went there and saw their flourishing garden. That inspired us to learn from them. We realised that our learners couldn't travel to School D for practicals, so we decided to use the small piece of land at our school to start our own garden*." Participant Two recounted how their school supported another school in starting a garden of their own: "*Our neighbouring school, School K, visited us to see our garden. They spoke to me and Mama Faith because they wanted to start their own. We explained everything to them: how to begin, what steps to follow, and how to choose seasonal crops*." These examples reflect the importance of collaboration, knowledge sharing, and mutual support among schools in advancing sustainable practices and integrating them into the curriculum.

6. Academic success

The integration of school food gardens into the curriculum was identified by participants as significantly enhancing learners' academic performance and engagement, particularly in subjects like Agricultural Sciences and Environmental Education. Participant One highlighted the educational value of the garden, emphasising that learners were not only acquiring environmental knowledge but also entrepreneurial skills: "*They have learnt all this through the lessons in the garden… conserve the natural resources. And they also know that as an entrepreneur*." Participant Two discussed the measurable academic improvement in specific subjects attributed to the garden-based approach, especially among previously underperforming learners: "*Underperforming subject, meaning below 65%. Through the help of the garden, our performance is really good. It is good because we are performing above 80%*." Further elaborating, Participant Two also described how the school garden has sparked interest in Agricultural Sciences among learners from non-science streams, thus broadening subject choice and academic participation: "*And previously Agricultural Sciences used to be done by the science stream only, but for now, because of the garden, even those that are doing the general stream are interested. They even go to the school management team and ask, 'Is it possible to take the subject?' And they agreed*." Participant Four emphasized the importance of the teacher's ability to link classroom knowledge to practical garden activities for meaningful academic learning: "*As long as the educator knows how to take the knowledge into the garden*." Participant Five illustrated how learners express their academic understanding through creative tasks, such as drawing garden elements and identifying vegetables: "*My children draw the garden in their books, and they will show their favourite vegetable. For example, they can draw and show an onion and show beetroot or spinach*."

4. Discussions

1. Food security

The data highlighted how school food gardens have become a direct source of food for vulnerable learners and their families. Participants Five and Six reflected that they feed

the whole school and give learners vegetables to take home, promoting food access beyond the school gates. This aligns with the findings of the Food and Agriculture Organisation (Boliko, 2019), which emphasises that school gardens can enhance food security by increasing access to diverse, fresh, and locally produced food, particularly in low-income communities. Moreover, participants reported that learners take the gardening knowledge home, where they create backyard gardens and contribute to household food production. This demonstrates a ripple effect, where the school garden becomes a catalyst for community-level food security, as seen in the statement. This reflects an important dimension of curriculum repurposing, making learning relevant to real-world challenges. According to Lam et al. (2019), participatory approaches like photovoice and school gardening embed local knowledge and foster agency, enabling learners and their families to adapt learning to their lived realities. The narrative also highlights how teachers model and lead the integration of practical agriculture into the curriculum to support both consumption and economic empowerment. Digital Stories Participant One noted that learners understand the value of profit and basic business concepts through activities such as harvesting and selling produce. This finding supports the work of Mukembo et al. (2020), who argue that school-based agricultural projects empower learners with livelihood skills and financial literacy, crucial for navigating the socio-economic challenges of post-school life. Teachers also described the symbolic and practical support they extend to vulnerable families by providing vegetables in times of illness or bereavement. This humanistic approach reflects a communal ethic grounded in Ubuntu and social solidarity, which resonates with African indigenous pedagogies and values of mutual care (Jecker, 2025).

2. Nutrition education

The findings highlight nutrition education as a significant success resulting from teachers' leadership in curriculum repurposing through school food gardens. This aligns with growing global recognition of the role schools play in promoting lifelong healthy eating habits and food literacy (Silva et al., 2023). Participants described how school gardens go beyond academic outcomes to instill practical knowledge about nutrition, food security, and natural remedies, thus supporting learners' holistic development and sustainable livelihoods. For instance, Photovoice Participant One emphasised that gardens are symbolic of life and should promote healthy food choices. This reflects the idea that food gardens serve as living classrooms where theoretical knowledge is contextualised through real-life application, an approach endorsed by constructivist learning theories (Acharya et al., 2023). Photovoice Participant Five elaborated on how school gardens help address food insecurity and health challenges both at school and at home. This suggests that gardens can improve nutritional status while mitigating the economic burden of food acquisition, a benefit supported by studies in low-income communities (Naicker et al., 2023). Interview Participant One underscored the importance of using garden produce to create balanced diets for learners, thereby enhancing physical well-being and learning capacity. This is consistent with the World Health Organization's (2022) emphasis on school-based interventions as critical in addressing malnutrition and instilling lifelong dietary habits. Moreover, as indicated by Participant One, the garden's impact extends to the wider community. This echoes the community development perspective, which advocates for participatory, place-based educational models to

enhance social capital and collective well-being (Oloba, 2024). Interview Participant Six introduced another dimension of nutrition education: the medicinal use of herbs grown in school gardens. Such integration of indigenous knowledge into the curriculum aligns with decolonial and African-centered pedagogies (Uleanya & Yassim, 2024), reinforcing sustainable, culturally relevant practices.

3. Entrepreneurship skills

The data reveal that school food gardens serve not only as platforms for agricultural education but also as spaces for developing real-world economic competencies among learners. Teachers play a central role in leading this curriculum repurposing effort, aligning classroom instruction with practical entrepreneurship to foster sustainable livelihoods. This finding aligns with the growing body of literature that advocates for integrating entrepreneurial education in schools, particularly in contexts of socio-economic disadvantage (Mpuangnan et al., 2024). The interviews illustrate how learners engage in the entire value chain of agricultural entrepreneurship, from production to marketing and sales. Participant One's insights on learners distinguishing between subsistence and commercial farming underscore a deeper conceptual understanding of farming as both a livelihood and a business. This resonates with the work of Uleanya and Yassim (2025), who argue that quality education through entrepreneurship education should instil a mindset of opportunity identification, resource mobilisation, and value creation. Moreover, the participants describe how learners apply classroom content, such as marketing principles taught in Grade 12, to actual selling scenarios, confirming Kolb's (2014) experiential learning theory, where knowledge is constructed through concrete experience. Participant Four's observation that learners "go and sell" after harvesting links the curriculum directly with active participation in micro-enterprise, reflecting not just theoretical understanding but also the practice of entrepreneurship.

The entrepreneurial activities mentioned, selling vegetable bunches, managing money, understanding profit margins, and reinvesting income, point to the development of financial literacy and economic agency among learners. This aligns with the views of Mhlongo et al. (2025), who emphasises the importance of entrepreneurial learning in fostering independence and resilience among young people. Participant Six's account of learners making up to R1500 and depositing the money into a school account introduces early financial management skills, promoting a savings culture and responsible use of resources. Importantly, these activities also benefit the wider school and community. Participant Six explains how proceeds from garden sales are used to support school operations and community welfare, illustrating how the garden becomes a social enterprise. The donation of produce to financially constrained community members further demonstrates the values of empathy and Ubuntu, critical in an African pedagogical context (Ngubane & Makua, 2021). Such engagement fosters not only economic but also moral and civic development. The learners' pride in using their earnings to buy school uniforms, as mentioned by Participant One, illustrates the motivational and dignity-enhancing effects of entrepreneurship education. It contributes to learners' self-worth and nurtures a sense of ownership over their educational journey, an important goal of sustainable education (Agbedahin, 2019).

4. Small-scale farming

The integration of small-scale farming into the school curriculum, as reflected in the participants' responses, demonstrates a transformative approach to education that goes beyond traditional classroom learning. Teachers emphasised that school food gardens serve not only as pedagogical tools but also as catalysts for imparting practical agricultural skills and fostering entrepreneurial mindsets among learners. This aligns with extant research highlighting the role of school gardens in enhancing experiential learning and promoting sustainable livelihood skills (Acharya et al., 2023). Participant One's assertion that agriculture is "life" and a "business on its own" underscores the economic potential embedded within small-scale farming initiatives. This mirrors findings by Adekunle (2021), who argue that school-based agricultural programs can equip learners with the entrepreneurial skills needed to navigate agricultural markets and sustain livelihoods. The acknowledgement that learners understand business challenges and alternatives suggests a shift towards practical entrepreneurship education, which is critical for rural youth empowerment (Rashid, 2019). The observation by Participant Two that learners transfer gardening skills from school to their homes confirms the diffusion of knowledge beyond the classroom environment, supporting studies that show school gardens encourage household food security and community resilience (Amiri et al., 2021; Holloway et al., 2023). The use of traditional seed preservation methods, as described by the participant, illustrates an integration of indigenous knowledge with modern agricultural education, a combination shown to improve sustainable farming practices (Buthelezi, 2024).

Participant Four's reflection on irrigation techniques further highlights the practical skills acquired through school farming, which differ from traditional home practices. This indicates that school gardens provide learners with exposure to improved agricultural methods, consistent with research by Malapane et al. (2024), which finds that school gardens can introduce innovative farming technologies and enhance agricultural productivity at the community level. The enthusiasm expressed by Participant Five, who notes learners' enjoyment in activities such as ploughing and irrigating, and the tangible benefit of harvesting produce to share with families, speaks to the motivational and socio-economic impact of these gardens. Such hands-on engagement is vital for fostering positive attitudes toward farming and sustainability (Uzorka et al., 2024). Participant Two's digital story observation that learners develop a "love for farming" and gain practical understanding of soil types reflects the pedagogical value of experiential learning models in agriculture education. Experiential learning theory supports that learners grasp complex scientific concepts more effectively when engaged in real-life activities (Kong, 2021).

5. Collaboration skills

The data on collaboration skills underscores the pivotal role of cooperative partnerships and knowledge exchange among schools in successfully repurposing the curriculum through school food gardens. Teachers' narratives reveal that collaboration is not only about sharing resources but also about mentoring, mutual learning, and building capacity across schools to embed sustainable livelihood practices effectively. Participant One's experience of learning from a neighbouring school's flourishing garden illustrates how inter-school collaboration serves as a catalyst for initiating new projects within resource-

constrained contexts. This mirrors findings in educational leadership literature that highlight the importance of professional learning communities and networks as drivers of innovation and school improvement (Harris & Jones, 2017). By visiting and observing a successful model, the teachers were able to contextualise best practices and adapt them to their own local environment, aligning with Wenger's (2012) concept of communities of practice, where learning is social and situated. Similarly, Participant Two's description of guiding a neighbouring school through the steps of starting their own garden exemplifies the reciprocal nature of collaboration, moving beyond mere observation to active mentorship. This supports the notion that collaboration fosters collective efficacy among educators, enhancing their confidence and competence in curriculum innovation (Oloba, 2023). Moreover, this aligns with the principle of distributed leadership, Naicker and Mestry (2013), where leadership is shared and enacted through collaborative interactions rather than centralised in an individual. These examples reflect how collaborative efforts contribute to sustainability in education by building networks of support that encourage continuous knowledge sharing and problem-solving (Varga & Havas, 2018). Collaboration also encourages the integration of practical, context-relevant skills into the curriculum, which is critical for sustainable livelihoods education (Blose, 2025). Through collaboration, teachers leverage collective resources and expertise, ensuring that curriculum repurposing transcends individual schools and becomes a community-wide practice.

6. Academic success

The data clearly indicate that integrating school food gardens into the curriculum positively influences learners' academic performance and engagement, especially in subjects such as Agricultural Sciences and Environmental Education. This finding aligns with broader research that shows experiential learning methods, like garden-based education, enhance academic outcomes by providing hands-on, contextual learning experiences (Corbacho-Cuello & Muñoz-Losa, 2025). Participant One's observation that learners not only gain environmental knowledge but also entrepreneurial skills highlights the multidimensional benefits of school gardens. This resonates with findings by Kanosvamhira et al. (2023), who argue that school gardens foster practical skills and empower learners with real-world competencies, including entrepreneurship. Such skills are essential for sustainable livelihoods, as learners develop a better understanding of natural resource conservation and economic opportunities within their communities. Participant Two's testimony of improved performance in previously underperforming subjects illustrates the potential of school gardens to boost academic achievement. This supports Williams (2018) assertion that garden-based learning can increase student motivation and improve test scores, particularly for subjects that involve science and environmental literacy. Furthermore, the expanded interest in Agricultural Sciences beyond the traditional science stream, as noted by Participant Two, reflects the garden's role in democratising access to subjects often limited to specific learner groups, thereby promoting inclusivity and widening participation (Hay, 2025).

The emphasis by Participant Four on the teacher's role in bridging theoretical knowledge and practical garden activities underscores the importance of teacher capacity and pedagogical strategies in curriculum repurposing. According to Fisher (2018), effective

garden-based learning depends largely on educators' ability to connect classroom content with hands-on experiences, ensuring meaningful and relevant learning. Participant Five's example of learners expressing their knowledge through creative activities, such as drawing, demonstrates the integration of multiple intelligences and learning styles within the repurposed curriculum (Setyawan et al., 2024). This kind of learner-centred approach not only enriches academic understanding but also nurtures creativity and engagement. Overall, the findings support the view that school food gardens, when led by proactive teachers who repurpose curricula thoughtfully, can enhance academic success and equip learners with vital skills for sustainable livelihoods. This approach embodies transformative education that links academic content with practical, community-oriented applications (Bopape, 2022).

5. Recommendations

Based on the findings of this study, the following recommendations are proposed:

1. Integration of School Gardens into the Formal Curriculum

To strengthen the educational value of school food gardens, it is recommended that they be formally integrated into the school curriculum. Subjects such as Agricultural Sciences, Life Orientation, Natural Sciences, and Business Studies should intentionally incorporate practical garden-based activities that align with learning outcomes. This integration will not only enhance learners' academic understanding but also equip them with livelihood skills relevant to their socio-economic contexts. By repurposing curriculum content through experiential learning in gardens, teachers can provide learners with opportunities to engage meaningfully with real-life challenges such as food insecurity, environmental sustainability, and self-reliance.

2. Investment in Teacher Training and Support

Teachers play a pivotal role in the success of curriculum repurposing through school gardens. It is therefore essential to invest in continuous professional development focused on sustainable agriculture, nutrition education, and entrepreneurship. Equipping teachers with practical knowledge and pedagogical strategies will enable them to lead garden-based initiatives more effectively and innovatively. Training should also include methods of integrating indigenous knowledge, business principles, and community engagement into garden activities. With adequate support, teachers can become change agents who bridge the gap between classroom learning and real-world application.

3. Provision of Infrastructure and Resources

The sustainability and effectiveness of school food gardens rely heavily on access to basic infrastructure and agricultural resources. It is recommended that schools be supported with tools, seeds, irrigation systems, composting facilities, and other essential inputs. Government departments, private sector stakeholders, and NGOs should be encouraged to form partnerships with schools to ensure the consistent provision of materials and technical assistance. By addressing resource gaps, schools will be better positioned to maintain productive gardens that support both educational and nutritional goals.

4. Promotion of Community and Stakeholder Involvement

School food garden initiatives should be rooted in strong community collaboration to ensure long-term sustainability and shared ownership. Schools are encouraged to engage parents, local farmers, and community organisations in the planning, implementation, and utilisation of gardens. Such partnerships can enhance knowledge exchange, extend gardening practices into homes, and increase food access for vulnerable families. Involving community stakeholders also helps position the school as a hub for local development and social upliftment, reinforcing the broader impact of curriculum repurposing efforts.

5. Monitoring, Knowledge Sharing, and Scaling of Best Practices

To maximise the impact of school garden programmes, schools should establish mechanisms for monitoring outcomes, documenting successes, and sharing best practices. Regular assessment of academic, nutritional, and socio-economic impacts will provide data-driven evidence for policy refinement and advocacy. Additionally, fostering inter-school collaboration through professional learning communities, workshops, and site visits can facilitate peer learning and the scaling of successful models. This collaborative ecosystem will enable schools to continuously improve and innovate in their approaches to curriculum repurposing for sustainable livelihoods.

Conclusion

This study has illuminated the remarkable successes of teachers in repurposing the curriculum through school food gardens to promote sustainable livelihoods. The evidence demonstrates that such initiatives transcend conventional teaching by addressing pressing socio-economic challenges like food insecurity, unemployment, and educational inequity. Through innovative pedagogical strategies, teachers have leveraged gardens not only as spaces for academic learning but also as transformative tools for nutrition education, entrepreneurship training, small-scale farming, collaboration, and improved academic performance. What emerges is a model of education that is deeply rooted in context, responsive to community needs, and grounded in experiential learning. The school food garden becomes a microcosm of sustainability where theory meets practice and where learners are empowered to become change agents within their homes and communities. By fostering agricultural literacy, health consciousness, economic skills, and collaborative values, teachers are not merely educating; they are nurturing future-ready citizens. Thus, the integration of food gardens into the school curriculum represents both an educational innovation and a pathway toward resilient, self-reliant societies.

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