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Bridging Skills Development and Agribusiness: Evaluating the Poultry Layer Programme at Gert Sibande TVET College

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Abstract

Youth unemployment remains one of South Africa's most pressing economic and social challenges, with Technical and Vocational Education and Training (TVET) colleges positioned as key institutions in the transition from education to employment. While TVET colleges aim to produce work-ready graduates, a persistent gap remains between theoretical instruction and practical application, particularly in agriculture-related programmes. To improve Work-Integrated Learning (WIL), youth enterprise incubation, and local agribusiness value-chain integration, this qualitative case study investigates the viability and educational value of starting a poultry layer enterprise at Gert Sibande TVET College's Driepoort farm (Perdekop, Mpumalanga). Through semi-structured interviews, document reviews, and site observations, the study gathered data from 15 stakeholders (10 students, 2 lecturers, 2 deputy principals, and 1 farm manager) using purposive sampling. Thematic analysis was used to analyse the data. The findings indicate that Driepoort is an underutilised institutional asset, possessing sufficient land, water, and basic infrastructure; a strong and consistent local demand for eggs; a significant level of student interest in agribusiness; and institutional endorsement for an integrated training-to-enterprise model. The need for formal market links and technical mentorship, feed-cost volatility, capital requirements for housing and biosecurity, and inadequate operational coordination are some of the major obstacles that have been identified. The study shows that a phased implementation can improve local food security, produce various revenue streams

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(eggs, training fees, manure, and spent hens), and yield pedagogical benefits (1) through farm activation and curriculum integration, (2) through structured enterprise incubation for a chosen group of students, and (3) through value-addition and market expansion. The study concludes that a TVET-based layer enterprise is both economically feasible and educationally valuable as long as operational risks are reduced by strong governance, biosecurity procedures, and strategic alliances (such as feed supply agreements and offtake contracts). To ensure sustainability and scalability, the recommendations focus on establishing incubation pathways for student cooperatives, integrating production into assessment and WIL schedules, activating a Poultry Enterprise Centre of Practice, and securing technical and market partnerships.

Keywords: *Poultry Farming, TVET Colleges, Youth Unemployment, Skills Development, Agribusiness, Work Integrated Learning*

1. Introduction

The youth unemployment rate in South Africa has reached a crisis level, with the expanded unemployment rate for people aged 15 to 34 consistently above 60 percent (Statistics South Africa, 2024). In this context, Technical and Vocational Education and Training (TVET) colleges play a key role in preparing people for jobs, helping them move into the job market, and making sure everyone can participate in the economy. Nevertheless, despite this directive, numerous graduates encounter difficulties securing employment or launching entrepreneurial initiatives due to inadequate exposure to authentic operational settings, insufficient practical skills, and a lack of organised pathways for enterprise development (Statistics South Africa, 2024). The disparity between institutional training and labour market requirements indicates profound systemic issues that necessitate innovative strategies in curriculum development, work-integrated learning (WIL), and localised economic integration (Daka et al., 2023).

Agriculture is still vital to South Africa's rural economy and society. It is still the main source of food, jobs, and regional growth. In provinces like Mpumalanga, where the weather is favourable, there are established agricultural corridors, and people have been farming for a long time, agribusiness is a big but underused opportunity for young people to become involved. Nevertheless, nascent agripreneurs often face structural impediments, such as restricted access to training, insufficient start-up capital, fragile market connections, and inadequate familiarity with commercial production standards. These limitations diminish the capacity of agriculture to function as a scalable avenue for youth employment and rural economic advancement (AgriSA, 2024; Mpundu & Bopape, 2022).

In this case, raising chickens, especially for eggs, is a simple and cheap way to start a business in agriculture. Poultry businesses typically require less capital to launch, enjoy consistent customer demand, and operate within predictable production cycles. This makes them a beneficial choice for small businesses and people who are just starting out. Layer enterprises offer extra benefits by making money through constant egg production, which creates chances for regular cash flow and participation in the market. Eggs are also a direct way to ensure that families and communities have enough food. This is because they are cheap, healthy, and can be used in programmes like school nutrition schemes (Josephson, 2018).

The idea to set up a poultry layer business at Gert Sibande TVET College's Driepoort farm in Perdekop is a timely and strategic move. By making the farm a place for both training and business, it provides people a chance to strengthen the link between learning new skills and putting them to use in the real world of agribusiness. The initiative aligns with national skills and employment policies while addressing pressing socioeconomic needs in Mpumalanga by incorporating production activities into the curriculum, improving WIL opportunities, supporting student businesses, and using local value chains. This article looks at the proposed enterprise from different angles, including its ideas, policies, operations, and finances. It also shows how it could be a scalable, institution-based way to combine TVET learning with sustainable agribusiness growth (Firenzy, 2025; Farirai Rusere et al., 2023; Ogur, 2023).

1.1 Background and Context

The purpose of Technical and Vocational Education and Training (TVET) colleges in South Africa is to provide a skills-based education system that can turn out skilled artisans, technicians, and entrepreneurs who can make a real difference in the country's development. As part of the larger plan to improve skills after apartheid, TVET institutions were supposed to close the gap between school and work by offering programmes that were similar to what businesses and the economy needed. However, there are still worries about how employable graduates are and how well college programmes meet the changing needs of the job market. People often say that one of the biggest problems is that there are not enough Work-Integrated Learning (WIL) opportunities, especially in rural and semi-rural areas where there are few private sector businesses that can manage many students at once (Molefe & Ngema, 2023). Without structured, real-world practical experience, many students finish their degrees without the skills they need to work well in agricultural, technical, or industrial settings. This gap between learning in the classroom and putting it into practice hurts both graduate confidence and readiness for the job market (Njengele et al., 2024).

Mpumalanga Province has a diverse agricultural economy that includes forestry, livestock, poultry, horticulture, and field crop production. This is true for the province as a whole. The province has put more focus on farming programmes for young people, the growth of agro-processing hubs, and the promotion of cooperative-based business models as part of its plan for rural development. These policy commitments show that people understand that agriculture can be a powerful tool for creating jobs, making sure people have enough food, and improving the lives of people in rural areas. But even with this good policy environment, many studies show that there are still gaps in institutional coordination, technical mentorship, and post-training support for new small-scale farmers. Many young people who start working in agriculture have a hard time moving beyond subsistence or entry-level production because they don't have easy access to training farms, extension services, and market-orientated technical advice (Dlodlo, 2025; Sandhu, 2025; Materechera & Scholes, 2022; R.H. & Worth, 2020).

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In this context, the Driepoort farm, which is owned and run by Gert Sibande TVET College, is a valuable but underused institutional asset. The farm has good land and a dependable water source and is close to rural markets and transportation routes, making it a good place for agricultural training and business development. The site is mostly a passive landholding right now, but it could be turned into an active production unit that is fully integrated into teaching, learning, and Work-Integrated Learning activities. With the right investments and planning, the farm could become a dynamic place for developing practical skills, starting new businesses, and producing new ideas for rural agribusiness. National expectations for TVET colleges to diversify their training methods, have a bigger impact on the community, and get more young people involved in local economic development are in line with the need to make the most of these institutional resources (Makungo et al., 2025; Gadanakis, 2024; Kirui & Kozicka, 2018). Top of Form

1.2 Problem Statement

South Africa continues to experience high levels of youth unemployment, particularly among graduates from Technical and Vocational Education and Training (TVET) colleges. TVET schools are supposed to provide students practical training that prepares them for jobs, but many students do not receive enough hands-on experience or exposure to how real businesses work. Emerging graduates in the agricultural sector frequently encounter difficulties in transitioning to sustainable agribusiness ventures owing to restricted access to production infrastructure, mentorship, and market connections. The Driepoort farm at Gert Sibande TVET College is an institutional asset that is not being used to its full potential, but it could help with practical training and business growth. But this potential is not being used because there is no structured model that connects training to running a poultry farm. Therefore, we need to come up with and carry out a poultry layer business that combines skills development, hands-on training on the farm, and business incubation to improve the job prospects of graduates and make local agribusiness value chains stronger (Nikisi et al., 2025; Chauke, 2023; Mwale & Ntsobi, 2023).

1.3 Research Objectives

To develop and evaluate a sustainable poultry layer enterprise model that integrates vocational training, enterprise incubation, and local market participation at Gert Sibande TVET College's Driepoort farm in Mpumalanga.

1. To examine the current gaps and limitations in practical agricultural training and enterprise readiness among students at Gert Sibande TVET College.
2. To assess the feasibility of establishing a poultry layer production enterprise at Driepoort farm, including infrastructure, production inputs, operational requirements, and market opportunities.
3. To design an integrated training-to-enterprise model that links theoretical instruction, Work-Integrated Learning (WIL), and student incubation pathways.
4. To evaluate the potential economic, educational, and community development benefits of the proposed poultry enterprise.
5. To develop recommendations for the sustainable implementation, management, and expansion of the poultry layer enterprise within the college and local agribusiness value chain.

1.4 Research Questions

1. What are the existing challenges in practical agricultural training and graduate employability at Gert Sibande TVET College?
2. What infrastructural, operational, and market conditions are required to establish a viable poultry layer enterprise at Driepoort farm?
3. How can vocational training, practical farm-based learning, and enterprise incubation be effectively integrated into one cohesive model?
4. What economic, educational, and social impacts could the poultry layer enterprise have on students, the college, and surrounding communities?
5. What strategies are necessary to ensure the sustainability and scalability of the enterprise within the broader agribusiness ecosystem?

1.5 Rationale for the Study

The justification for this study is based on its importance for youth employability, local economic growth, institutional stability, and policy coherence. It seeks to bridge the divide between theoretical knowledge and practical skills among TVET graduates, thereby improving their employability and opportunities for self-employment. Poultry layer businesses can help people in rural areas by making money, growing food, and starting small businesses. Setting up a successful business at Driepoort Farm will bring in money, make TVET programs more useful, and strengthen the college's strategic role in community development. The study also fits with national and provincial goals for agro-processing, food security, cooperative development, and youth entrepreneurship (Yusvana, 2025; Selane & Odeku, 2024; Setiadi et al., 2020).

2. Literature Review

2.1 Skills Development, Employability, and Work-Integrated Learning

Vocational and technical education systems increasingly recognise the development of skills as a multifaceted process that goes beyond the mere acquisition of theoretical knowledge. Employability depends on a graduate's ability to find and keep a job or start their own business, along with a combination of cognitive, technical, and entrepreneurial skills (Jackson, 2020). In labour markets with high youth unemployment and unstable wage opportunities, especially in developing economies like South Africa, employability is not just about getting a job. It is also about being able to produce new ideas, change, and do economic activities on your own. TVET colleges are important because they supply graduates practical, market-responsive skills that help them move from school to work (Jafarov, 2025; Zuo et al., 2025).

Many people agree that Work-Integrated Learning (WIL) is one of the best ways to improve job prospects. WIL makes students more competent, confident, and ready to work by giving them real-world tasks, industry standards, and professional norms. These experiential elements assist students in contextualising their theoretical knowledge, enhancing problem-solving skills, and assimilating the discipline-specific behaviours anticipated in the labour market. Research indicates that WIL fosters transversal skills, including communication, teamwork, responsibility, and adaptability, which employers consistently regard as crucial for

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effective workplace integration (Lubbe & Svensson, 2022; Govender & Wait, 2017).

Even though WIL has benefits, it is still challenging to put into practice in the South African TVET sector because of structural problems. Many schools have trouble getting enough partnerships with businesses because they do not have enough placement space, their campuses are too far apart, and there are bottlenecks in certain industries that make it impossible for private companies to take on large groups of students. This is especially challenging for agricultural training, where farms and agribusinesses may not have the money, the ability to follow the rules, or the size to host students. Consequently, students frequently attain qualifications without sufficient exposure to practical contexts, thereby compromising their confidence and employment prospects (Nthako & Khumalo, 2025; Bhilitane et al., 2024).

In light of these challenges, the literature increasingly points to the importance of campus-based enterprise models as a strategic alternative for facilitating substantive, high-quality experiential learning. These kinds of models put production activities right in the classroom, so colleges can mimic real-world conditions while still being responsible for teaching, scheduling, and resource allocation. Campus businesses, like poultry units, crop production sites, or agribusiness hubs, provide students the chance to learn about the whole production process, make decisions, manage risks, and understand how the market works. Additionally, they foster avenues for student entrepreneurship by exposing learners to business operations, cost structures, supply chains, and enterprise development processes that enhance their technical training (Gabrielsson et al., 2024; Medina et al., 2020).

Furthermore, literature on employability underscores that entrepreneurial competencies are essential for adapting to evolving labour markets, characterised by a decline in traditional wage employment. More and more, graduates need to be able to spot opportunities, gather resources, produce new ideas, and run small businesses. TVET institutions are important for more than just getting graduates ready for jobs. They also help people start their own businesses and work together with businesses that fit in with the local economy. Campus-based agribusiness operations, like the proposed poultry layer enterprise at Driepoort farm, fit well with this new way of thinking because they provide students hands-on experience that combines technical skills with business development exposure (Matabane et al., 2024; McGrath & Russon, 2023).

The literature collectively asserts that enhancing employability necessitates a cohesive strategy that combines theoretical education, organised practical experience, and the development of entrepreneurial skills. In situations where external WIL placements are scarce, institutionally managed enterprise sites present a feasible and pedagogically robust alternative for facilitating work-integrated learning, improving graduate outcomes, and fostering community-driven economic development. This theoretical framework underpins the justification for incorporating a poultry layer enterprise into the educational and entrepreneurial development activities of Gert Sibande TVET College (Botha & Amaral, 2025; Moalosi et al., 2022).

2.2 Agribusiness as a Driver of Rural Development

Agribusiness plays a significant role in driving rural development, particularly in regions where agriculture remains a dominant economic activity and a primary source of livelihoods. The sector not only helps make food, but it also creates jobs, brings in money, and boosts local value chains (FAO, 2021). Many developing countries, including South Africa, increasingly view agribusiness as a strategic driver of rural change. This is because it connects primary agricultural production with processing, logistics, retail, and service-related activities. This interconnectedness lets agribusiness have a ripple effect on rural economies, raising both household income and the economy's ability to bounce back from shocks (Rahmani, 2024; Dhillon & Moncur, 2023).

A growing body of research shows that value chain integration is crucial for the success of agribusiness interventions. Isolated primary production often yields limited returns, whereas enterprises embedded in well-structured value chains—such as poultry, horticulture, or livestock systems—benefit from economies of scale, predictable demand, and access to diversified markets. Value chain development also makes businesses more competitive by making it easier for producers, processors, input suppliers, and buyers to work together. In rural areas, this kind of integration is essential for smallholder farmers, new entrepreneurs, and businesses run by young people to be able to take advantage of new opportunities (Mahali Elizabeth Lesala et al., 2025).

Access to training and technical assistance is another important factor in the long-term success of agribusiness. Studies on rural development indicate that farmers and agripreneurs need to keep learning about things like biosecurity, production techniques, financial management, and compliance standards. Television colleges, agricultural training centres, and development agencies are examples of institutions that provide structured extension services, hands-on demonstrations, and business support. These institutions are crucial for developing these skills. Agribusiness initiatives endorsed by training institutions are more likely to thrive due to their incorporation of skills development, on-site mentoring, and ongoing capacity enhancement (Madende et al., 2024; Rasanjali et al., 2021).

Additionally, the growth of agribusiness in rural areas is heavily dependent on how easily businesses can access to markets. Market linkage systems, such as formal contracts, aggregation centres, cooperatives, or community-supported agriculture models, give rural producers stable demand, lower transaction costs, and chances to grow their businesses. Small-scale agribusinesses have a difficult time making money from their production when they cannot gain reliable access to markets. This leads to unstable income and less of an economic impact. So, programmes that purposefully connect with retailers, processors, school nutrition programmes, and local markets are important for rural development (Abraham et al., 2022).

In South Africa, more and more people are seeing the connection between agribusiness development and rural education and training systems as a way to provide young people more power and create jobs. TVET colleges, in particular, can be centres of innovation in rural areas by providing technical training, helping businesses get started, and connecting new agripreneurs with people in the value chain. The creation of a poultry layer business at the Driepoort farm of Gert Sibande TVET College fits with these goals for growth because it combines training, production, and structured market engagement in a rural setting (Nthoesane & Teele, 2024; Geza et al., 2022).

2.3 Poultry Value Chains in South Africa

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South Africa's poultry sector is among the most established and commercially significant components of the national agricultural economy, contributing to food security, employment, and agro-processing activities. The poultry industry makes up a fairly complex value chain. Even though the transformation has happened, there is still a dual system: large commercial producers control the formal market, while small and new producers mostly use informal channels. This structural imbalance affects how benefits and limitations in the value chain are shared across the sector (Pius et al., 2021; Nkukwana, 2018).

Small-scale poultry farmers still have a lot of trouble with the prices of feed and inputs. Studies show that feed costs account for 60–70% of all production costs. This means that production is sensitive to changes in global grain prices, currency fluctuations, and supply shocks at home. Small producers also have trouble getting cheap day-old chicks, veterinary supplies, and energy inputs. These cost pressures make it harder to make money and grow, especially for businesses in rural areas that do not have much bargaining power or ways to buy in bulk. Larger businesses, on the other hand, lower costs by using integrated supply chains, long-term contracts, and economies of scale. Because of this, more and more sector analysts are calling for actions that will help new farmers by making local feed alternatives stronger, allowing farmers to buy inputs together, and teaching them how to make things more efficiently (Attia et al., 2022; Lamb & Sherman, 2010).

Even with these problems, there is always a strong demand for poultry products, especially eggs. Supermarkets, informal retailers, restaurants, and township-based vendors, as well as institutional buyers like school nutrition programmes, hospitals, colleges, and prisons, all drive demand. Eggs are a very appealing product because they are cheap and healthy, and people of all income levels eat them at a steady rate. The distribution of eggs heavily relies on the informal economy. It gives small producers and youth businesses a chance to start their businesses (Mitchell, 2025; African Trade Platform, 2023).

Because egg prices and availability are constantly changing, there is also more room for substitutes in local markets. In the past few years, outbreaks of avian influenza in South Africa have caused supply problems that led to culling, temporary shortages, and price increases. Changes in imports have also affected market stability, showing how fragile the national supply chain is to shocks from outside the country. These changes make it possible for decentralised local producers to fill supply gaps, especially in rural and peri-urban areas where large commercial suppliers have higher distribution costs (Poultry World, 2023).

Therefore, making it easier for small-scale producers to become involved in the poultry value chain is beneficial for both the economy and food security. Localised production models, like TVET-based poultry businesses, can make communities more resilient by shortening supply chains, encouraging young people to start their own businesses, and keeping the egg supply steady during times of national disruption. The Driepoort farm project puts Gert Sibande TVET College in a favourable position to help integrate the regional value chain by making eggs, teaching students how to be agripreneurs, and connecting businesses run by students with retail and institutional markets (Ukaoha, 2023; Garcia-Dorado et al., 2021).

2.4 Project Concept: Poultry Layer Enterprise at Driepoort Farm

The objective of the proposed agricultural business concept was to offer students practical, competency-based training, generate revenue to sustain the school, create a platform for student-operated agricultural enterprises, and enhance food security in Perdekop and surrounding towns. To accomplish this, the enterprise required facilities such as layer houses with adequate space for storage; regulated heating, lighting, and ventilation systems; feed storage silos and mixing facilities; biosecurity gates; sanitation stations; disease monitoring protocols; egg handling, packaging, and storage areas; in addition to water purification systems and backup power sources. The first capacity would encompass a beginning flock of 1,500 to 2,000 laying hens. Hens are projected to commence egg-laying at 18 to 20 weeks of age and will continue for a duration of 72 to 80 weeks. To ensure a consistent supply of eggs, production cycles may be staggered (Magadla et al., 2024).

2.5 Economic Feasibility and Revenue Model

The economic feasibility of a poultry layer enterprise within a TVET context depends on its ability to respond to local market demand, maintain cost-effective operations, and generate diversified revenue streams. In South Africa, the demand for eggs is always high, and buyers come from both formal and informal markets. Retail stores, supermarkets, township traders, street vendors, school nutrition programs, and households in rural and peri-urban areas are some of the most important groups that need these products. Eggs are a common source of protein in South Africa because they are cheap, healthy, and culturally accepted. This means that people of all income levels eat them a lot. They are also ideal for informal markets because they are simple to carry and share. Many low-income families like to buy food in small, cheap amounts. Such an arrangement makes the market stable and easy to get to for new producers who work on a small to medium scale (Ramukhithi et al., 2023; Simelane, 2023).

From a financial perspective, the enterprise must incur expenses for several critical factors that influence its overall sustainability. Acquiring layer chicks or point-of-lay hens is a singular expense; however, feed represents the most significant recurring expenditure, accounting for up to 70% of overall costs in poultry operations. This aligns with the prevailing trends in the business, where global grain prices, currency fluctuations, and supply chain disruptions collectively influence production costs for emerging farmers. Expenses include vaccinations, routine veterinarian treatment to maintain flock health and mitigate disease risk, utilities such as electricity and water, and personnel for farm oversight, record-keeping, and daily management activities. The upkeep of infrastructure, encompassing the restoration of housing structures, feeders, and environmental control systems, also adds to continuous operational expenses. To establish an accurate budget and determine the break-even point, it is essential to identify the cost drivers (Portal, 2025; Nkukwana, 2018).

Revenue generation within the enterprise will be diversified to enhance sustainability and reduce sensitivity to market fluctuations. The primary revenue stream will come from egg sales, which may be offered in trays, in bulk to retailers, or in smaller quantities suited to informal traders. Eggs can also be sold to schools and other institutions that buy them for feeding programmes. These programmes create stable, ongoing demand and lower marketing costs. The business can make money in

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addition to selling eggs by charging for training programmes related to agriculture and Work-Integrated Learning (WIL), which includes practical farm experience as part of student assessment and curriculum integration. Selling chicken manure, which is a highly sought-after organic fertiliser by vegetable growers and small-scale crop farmers, can add even more value. At the end of each production cycle, spent hens can be sold as cheap meat to homes, traders, and informal butcheries. This procedure creates another source of income that makes the most of the assets (Varyvoda et al., 2021; Hilmi, 2019).

These combined income streams create a blended revenue model that integrates production, training, and value-adding activities, thereby enhancing financial resilience. The model aligns with best practices in agribusiness development, where diversification reduces operational risk and contributes to long-term enterprise sustainability. In the context of Gert Sibande TVET College, this integrated revenue structure also strengthens the institution's capacity to support student learning while generating income that can be reinvested into farm improvements, training resources, and enterprise expansion (Fundira, 2025; Raji et al., 2024).

2.6 Policy and Strategic Alignment

The poultry agribusiness initiative is in line with sector-specific, provincial, and national policy frameworks that place a high priority on youth employment, skill development, and rural economic transformation. At the national level, the project promotes the National Development Plan's (NDP) enterprise development and employment imperatives, especially its emphasis on boosting agricultural value chains and lowering youth unemployment. Additionally, it endorses the District Development Model (DDM), which places a strong emphasis on localised, integrated development solutions that address the distinctive socioeconomic characteristics of municipalities and districts (Adeyanju et al., 2023; Geza et al., 2022; Dube et al., 2016).

2.7 Implementation Framework

2.7.1Phase 1: Farm Activation and Training Integration

Establishing the academic alignment and fundamental infrastructure needed to operationalise the poultry agribusiness at the Driepoort farm is the main goal of phase 1. To guarantee biosecurity compliance, ideal ventilation, and capacity for both broiler and layer production systems, this project entails remodelling and outfitting every poultry house. The farm's activities will be formally incorporated into pertinent TVET curricula, especially in Agriculture, Primary Agriculture, and Animal Production programmes, after the physical infrastructure has been restored and is operating at full capacity. This integration will directly expose students to real-world, competency-based farm operations in their teaching and learning activities. To further organise student involvement throughout production cycles, Work-Integrated Learning (WIL) rotational schedules will be developed. This will enable cohorts to participate in activities like harvesting, feeding, immunisation, recordkeeping, and environmental monitoring. During this stage, the farm serves as a production location and a teaching space that enhances TVET students' experiential learning (Steyn, 2025; Fakude, 2024).

2.7.2 Phase 2: Enterprise Incubation

Phase 2 focuses on creating a structured enterprise incubation pipeline to convert student competencies into long-term entrepreneurial opportunities. This phase selects the best students from the WIL rotations and practical training based on their overall entrepreneurial potential, technical skills, ability to work well with others, punctuality, and following biosecurity rules. These chosen students receive focused assistance to establish cooperatives or microbusinesses that are in line with the value chains of poultry, including the production of broilers, the sale of eggs, the formulation of feed, waste-to-compost businesses, and input supply services. (Artūras Jurgelevičius et al., 2025; Motlhaudi, 2025)

The college then negotiates offtake agreements with retailers, butcheries, school nutrition programmes, informal traders, and community markets to facilitate market access in collaboration with sector partners and local agribusiness stakeholders. This lowers early-stage market entry barriers and improves post-training economic outcomes by positioning student-led businesses for instant engagement in local economic ecosystems. This incubation stage makes sure that the poultry project develops beyond training and becomes a driving force for community food security, rural enterprise growth, and youth employment (Marumo & Mabuza, 2018).

2.7.3Phase 3: Value Chain and Market Expansion

By growing its value chain operations and bolstering its market presence, phase three aims to position the poultry business for long-term competitiveness. A small-scale egg grading and packaging facility is introduced at the start of this phase, allowing for better quality assurance, increased product differentiation, and compliance with industry standards. By internalising these value-adding procedures, the company can advance beyond primary production and increase its profit margins in the poultry value chain. Concurrently, efforts are directed toward securing supply contracts with retailers, institutional buyers, school nutrition programmes, hospitals, and hospitality establishments to guarantee stable, high-volume demand. These contracts improve the company's reputation in the local agribusiness community in addition to guaranteeing steady revenue streams. To establish the farm as a reliable supplier within Mpumalanga's food ecosystem, the project will create a branded local product line that embodies quality, freshness, and community-based production. Phase 3 strengthens the enterprise's sustainability while making a significant contribution to regional food security and rural economic development through value chain expansion and strategic branding (Aslam et al., 2020; Mottet & Tempio, 2017).

3. Research Methodology

3.1 Research Design

This investigation employs a qualitative case study design. Since the goal of the research is to investigate how a poultry layer enterprise can be created and successfully incorporated into Gert Sibande TVET College's teaching, learning, and enterprise development functions, the case study approach is appropriate. Qualitative research facilitates a comprehensive investigation into the experiences, perceptions, and contextual factors that shape the viability and execution of this initiative. A thorough analysis of the Driepoort farm as an actual institutional context where agribusiness operations and agricultural training collide is also made possible by the case study design. The research was conducted at the Driepoort farm of Gert Sibande TVET College in Perdekop, Mpumalanga—a strategically significant site as it provides both the physical infrastructure and institutional environment necessary for hands-on agricultural training, Work-Integrated Learning, and the incubation of student-led agribusiness enterprises (Priya, 2021; Rebolj, 2013).

3.2 Population and Sampling

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The study's target population consists of people who work directly on farms, in agricultural training programmes, and in institutional planning procedures. To ensure that the data gathered is rich, contextually grounded, and in line with the goals of the study, a purposive sampling technique will be used to identify participants who have pertinent knowledge and experience. Ten (10) students, two (2) lecturers, two (2) deputy principals (management), and one (1) farm manager will make up the total of fifteen (15) participants. The chosen sample size is suitable for producing in-depth viewpoints and promoting triangulation among institutional managers, academic staff, students, and farm operations personnel because qualitative inquiry values the depth and richness of insights over statistical generalisability. Once recurrent patterns were apparent and no significantly new information surfaced, data saturation was achieved, indicating that the sample was sufficient to answer the research questions. (Chowdhury & Shil, 2021; Priya, 2021).

3.3 Data Collection Methods

To guarantee a thorough grasp of the project context and stakeholder perspectives, data will be gathered using various qualitative methods. All 15 participants will participate in individual semi-structured interviews, which will allow for greater exploration of their perspectives, experiences, and insights regarding farm operations, enterprise development, and agricultural training. With the participants' permission, audio recordings of each 25–30-minute interview will be made to guarantee accuracy during transcription and analysis. A comprehensive document review will be conducted in addition to the interviews, looking at pertinent policy documents, programme materials, curriculum integration frameworks, and farm operational records to set the institutional and strategic environment in context (Chowdhury & Shil, 2021; Priya, 2021).

3.4 Data Analysis

Thematic analysis, a methodical qualitative technique that is well-suited to finding patterns and meanings in participant responses, was employed to analyse the data for this study. First, the researcher familiarises themselves with the interview transcripts by reading them several times to fully comprehend the viewpoints of the participants. Next came a coding procedure that involves classifying and organising important statements, concepts, and recurrent ideas into analytical units. These codes were then grouped into more general themes that were consistent with the research questions. These themes included the gaps that currently exist in practical agricultural training, operational viability and resource needs, training integration with enterprise development, expected benefits for students and the community, and sustainability and scalability considerations. To make sure every theme appropriately conveys the core of the data, theme development and interpretation required iterative refinement. Findings were triangulated across several data sources, such as field observations, documentary analysis, and interviews to improve analytical rigour and credibility (Chowdhury & Shil, 2021; Priya, 2021).

3.5 Trustworthiness

By using established qualitative criteria, the study's credibility was guaranteed. Triangulating data sources and viewpoints reduced researcher bias and validated emerging themes, which increased credibility. Maintaining thorough field notes, documenting methodological choices, and creating an extensive audit trail that details the entire research process—from data collection to analysis—all helped to ensure reliability. Confirmability was attained by ensuring that all interpretations were based on participant responses and by remaining reflexive throughout the study to ensure that the results represented the viewpoints of the participants rather than the researcher's presumptions. By giving readers or future researchers detailed, contextualised explanations of the research setting, participant characteristics, and study procedures, transferability was reinforced, and the findings' suitability for comparable contexts was evaluated. When combined, these tactics improved the study's methodological soundness and credibility (Stahl & King, 2020).

3.6 Ethical Considerations

Throughout the study, ethical integrity was maintained in compliance with national ethical standards and institutional research guidelines. To guarantee adherence to the principles of autonomy, beneficence, and non-maleficence, ethical clearance was acquired from the relevant institutional ethics committee prior to data collection. Every participant received a comprehensive briefing on the goals, parameters, and methods of the research, along with guarantees of anonymity, confidentiality, and voluntary involvement. Prior to conducting interviews, written informed consent was obtained, and participants were made aware of their right to withdraw at any time without incurring penalties. All data were safely stored in password-protected digital folders to protect privacy, and no personally identifiable information will be shared during the analysis or reporting of results. By taking these precautions, the research procedure was guaranteed to respect the rights of participants and adhere to the highest ethical standards anticipated in qualitative inquiry (Mirza et al., 2023; Ruslin et al., 2022).

4. Data Presentation and Findings

4.1 Introduction to Findings

This section presents the main conclusions derived from the data collected through semi-structured interviews, document analysis, and site observations. The study employed thematic analysis to identify recurrent themes and insights in the 15 participants' responses, which made it possible to interpret their experiences, opinions, and suggestions about starting a poultry layer business at Gert Sibande TVET College in a structured way. The findings are arranged based on themes that are related to the goals of the study, guaranteeing that the analytical framework and the study's objectives are coherent. All quotes and references are attributed using coded identifiers, such as Participant S1 for students, Participant L2 for lecturers, Participant M1 for management members, and Participant F1 for farm managers, with the objective of preserving participant confidentiality. This method preserves anonymity while allowing distinct viewpoints from various stakeholder groups (Naeem et al., 2023).

4.2 Theme 1: Gaps in Practical Agricultural Training

Participants frequently pointed out important deficiencies in the college's current practical agriculture training program. Despite the existence of agriculture-related programs, students have stated that they are not exposed to many real production systems because the majority of their practical experiences take place in controlled classroom simulations rather than real-world commercial settings. "We learn theories of livestock and crop production, but we don't actually run a farm cycle from beginning to end," one student clarified (S3).

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Lecturers agreed, pointing out that assessment exercises frequently focus on discrete practical assignments rather than exposing students to the entire operational process of a business. "Assessment focuses on practical tasks, instead of understanding business operations or enterprise management," according to a lecturer (L1). True work readiness, according to both lecturers and students, necessitates regular, practical involvement rather than sporadic demonstrations.

Therefore, the lack of an operational production unit at the Driepoort farm has led to a decline in graduate agricultural entrepreneurship, a lack of exposure to enterprise management, and a decline in student confidence. The results demonstrate a glaring lack of skills application that hinders the transfer from academic study to the establishment of worthwhile businesses and practical involvement in agribusiness.

4.3 Theme 2: Recognition of Driepoort Farm as a Strategic Resource

There was an overwhelming agreement among participant groups that the Driepoort farm is an important but underused institutional resource. The location was consistently characterised by participants as having appropriate land, a favourable climate, and existing structural facilities suitable for raising poultry but lacking the coordinated activity needed to support enterprise development and teaching. A perceived gap between institutional resources and student learning needs was highlighted by one student who stated, "The farm has potential, but it is not being used in a way that benefits students or the community" (S5). With one participant saying, "We have land, we have students, we have agricultural programmes—the missing link is an active production model," management echoed this sentiment (M1).

These viewpoints were corroborated by observational data, which verified the existence of water supply systems in need of regular maintenance and poultry housing structures that need to be renovated. However, no significant infrastructure limitations would hinder the start of poultry layer production. Given the circumstances, the results indicate that the farm has the basic resources needed to become a training-enterprise hub that can be fully used with only modest capital investment and improved operational coordination.

4.4 Theme 3: Feasibility and Market Opportunity for Layer Production

Layer production is economically feasible in the Driepoort context because of robust and steady local demand, according to participants with agricultural and technical expertise, such as the farm manager and lecturers. They pointed out that a wide and reliable market base is created by the daily purchases of eggs made by households, unofficial street vendors, school feeding programs, and retail establishments. "Eggs will always move," the farm's student emphasised. People purchase eggs even during difficult economic times" (S3), highlighting the commodity's accessibility and cultural acceptance as a daily source of protein.

The document review's findings supported these viewpoints, showing that recurrent avian influenza disruptions that lower the availability of eggs nationwide and sporadic supply shortages in neighbouring towns are related to high transportation expenses for commercial suppliers. These factors make it possible for locally produced, decentralised eggs to enter the market with lower logistical costs and better responsiveness to community demand (Sihlobo, 2023). Taking everything into account, the evidence suggests that layer production can serve as a dependable and competitive revenue stream for the college. Because of the favourable market conditions, the institution is well-positioned to strengthen and integrate with the regional poultry value chain.

4.5 Theme 4: Strong Student Interest in Enterprise Development

Students' intense interest in pursuing cooperative and self-employment agribusiness endeavours emerged as a major theme in the data. All ten student participants stated that they wanted to start their own farms, especially in the poultry industry, but they said they did not have the organised support needed to go from conceptual interest to operational readiness (Kanak et al., 2024). "We would like to farm," one student clarified. We lack knowledge about where to sell our products, how to raise capital, and how to initiate the process. Our worry is that the powers-that-may deescalate the activities in the farm because of perceived lack of impact" (S2), underscoring the lack of access to market linkage assistance, funding, and start-up expertise.

This worry was reaffirmed by lecturers, who pointed out that although entrepreneurship is taught in the curriculum, the practical application of these concepts is restricted by the lack of a working enterprise platform (Donaldson et al., 2025). One lecturer noted (L3), "We teach entrepreneurship, but it remains abstract without a real enterprise platform." These results indicate a lack of alignment between institutional support systems and student interest in entrepreneurship. "They also demonstrate that, when directed through a systematic training–incubation pathway, student motivation is a powerful asset that can favourably impact sustainability" (F1). The findings highlight the necessity of an integrated enterprise development model which combines classroom instruction, real-world experience, and the introduction of student-led agribusiness projects (Pliakoura et al., 2020).

4.6 Theme 5: Institutional Willingness and Stakeholder Alignment

The results show that key stakeholders are highly aligned and institutionally willing to support the establishment of a poultry layer enterprise at Driepoort farm. The project was clearly supported by the college council and management, who emphasised how well it aligned with institutional and national frameworks like the District Development Model, the National Skills Development Plan III, and more general policies pertaining to food security and youth entrepreneurship. This alignment was explained by one manager, who stated that "A project like the one at hand strengthens our relevance as a college and supports sustainable livelihoods for our students" (M2), indicating an awareness of how the business can support both educational and developmental mandates. The external agribusiness expert also affirmed their willingness to work together by providing technical advisory services, market linkage facilitation, and assistance with cooperative formation. The convergence of external stakeholder cooperation and institutional commitment indicates a favourable enabling environment. By guaranteeing that both internal governance structures and external value chain partners back the enterprise, this readiness improves overall project feasibility, lowers strategic risk, and raises the possibility of long-term sustainability.

5. Linking Findings to Literature

According to national policy guidelines, Gert Sibande TVET College is in a favourable position to host businesses. The role of

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TVET colleges in promoting work-integrated learning and enhancing connections between training and regional economic contexts is highlighted in the White Paper for Post-School Education and Training. Layer poultry farming provides a low-entry, high-impact platform for the industry and is adaptable to rural and peri-urban environments, making it suitable for young farmers. Participants agreed that egg production provides steady market demand and predictable income. Literature demonstrates that eggs are a staple protein consumed in South African homes, schools, and retail establishments. Other scholars emphasise poultry as an effective experiential skill acquisition method because of repetitive but skill-refining processes like feeding, vaccination, grading, and recordkeeping; the regularity of production cycles in layer farming was considered advantageous for training (Lei et al., 2025; Sebola, 2022; Beesabathuni et al., 2018; Nkukwana et al., 2018; Nordhagen & Klemm, 2018).

The study also showed that in order for students to transition from theoretical knowledge to practical competence, they needed organised mentoring and exposure to farms. This reinforces the idea that integrating TVET training into real-world production settings is crucial to achieve employability benefits. Without this integration, TVET students continue to receive academic training but are unprepared, which hinders their ability to enter the self-employment and agribusiness ecosystems. However, the investigation revealed issues with initial capital investment, disease control, and feed price volatility. Literature shows that feed costs account for over 60% of operating expenses in poultry businesses. Another highlighted phenomenon relates to the importance of biosecurity procedures and veterinary support systems for minimising flock losses, particularly in training settings where mistakes in animal care may be more frequent (Ayebare et al., 2025; Yusvana, 2024; Mesuwini, 2023; and Beesabathuni et al., 2018).

Overall, research and literature point out the viability of a layered poultry business at the college, but it calls for embedded learning systems, robust operational governance, and organised planning.

6. Conclusion of Findings

The outcome of the study demonstrates that the Driepoort farm offers very favourable conditions for establishing a poultry layer enterprise. Institutional strategic priorities, market readiness, student demand, and supportive policy frameworks combine to provide these favourable conditions. Participant data, document reviews, and site observations provide evidence that integrating a poultry business into the college's agricultural training ecosystem makes sense economically and pedagogically. While instructors and administrators emphasised the significance of bolstering Work-Integrated Learning in accordance with the college's mandate, students voiced a strong desire for more real-world, experiential learning opportunities. On a larger scale, avian influenza-related economic disruptions, persistent regional supply shortages, and high consumer demand for eggs all contribute to a favourable marketing environment for eggs produced locally.

Despite this readiness, the results also point to areas that need careful preparation. Renovating chicken houses, putting biosecurity systems in place, acquiring the right production inputs, and creating transparent governance frameworks to direct enterprise management are all important operational tasks. Stakeholders stated that there must be structured alignment between farm activities, assessment standards, and enterprise development outcomes, and curriculum integration emerged as a critical component. Sustainability factors, including feed cost control, environmental adherence, and long-term market linkage tactics, were also found to be crucial for guaranteeing the business's survival after initial deployment.

The study's overall conclusion is that a poultry layer business at Driepoort farm offers a calculated and practical chance to combine youth entrepreneurship, income generation, and skill development. The model enables active engagement in regional agricultural value chains, cooperative formation, enterprise incubation, and experiential learning. The initiative can assist in transforming TVET graduates from primarily job seekers into competent job creators by exposing them to agribusiness management and involving them in real production cycles. By doing this, the business supports local food systems, raises rural livelihoods, and makes vocational education in Mpumalanga more relevant and sustainable. Thus, the results validate the viability, educational worth, and institutional congruence of establishing the poultry layer business at Gert Sibande TVET College.

The study demonstrates that, as far as operational risks are controlled and instructional strategies prioritise experiential learning, a poultrylayer business at Gert Sibande TVET College is both strategically aligned and financially viable. With the right planning, the business has the potential to become a flagship example that integrates agricultural entrepreneurship, skill development, and provincial economic growth.

7. Recommendations

The implementation plan of the poultry enterprise is based on three interrelated elements: student capacity building, operational sustainability, and institutional design (World Poultry Foundation, 2025). The creation of a Poultry Enterprise Centre of Practice at Driepoort Farm will formally designate the location as a skills production hub, enhancing hands-on learning in agricultural programs at the institutional level. To promote multidisciplinary competencies in technical production, agribusiness management, and entrepreneurship, poultry production modules will be incorporated into the curricula of both business studies and agriculture. Students and staff will gain exposure to the industry through a structured mentorship partnership with nearby commercial poultry farms, which will improve technical coaching (Nassar, 2025; Palmarudi Mappigau et al., 2020; Nkukwana, 2018).

In its endeavour to pursue commercial interests, the college should facilitate long-term feed supply contracts with local feed mills, which will help stabilise input costs from the standpoint of operational and financial sustainability. The installation of small-scale automated systems, like automatic drinkers and egg collection racks, will increase productivity and lower handling errors. Sales agreements with nearby hospitals, schools, and retailers will further strengthen the business's financial stability by ensuring steady off-take and steady revenue streams. The plan includes comprehensive capacity development pathways for student support, such as cooperative development assistance, micro-grants or revolving funds, and business incubation opportunities where graduates can access starter flocks. To ensure that students receive hands-on, rotating instruction under the guidance of a farm technician and enhance their technical proficiency and entrepreneurial readiness, a model for farmer field

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schools will also be used (Louw Pienaar et al., 2021; Mwale, 2021; Balehegn et al., 2020).

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