



Assessing the effectiveness of Sector Education and Training Authority learnerships in promoting entrepreneurial growth: A case study of AgriSETA, Eastern Cape Province, South Africa.

**Thando Raymond Nxele
223058549**

**Doctor of Business Administration
at the University of KwaZulu-Natal**

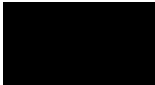
Supervisor: Dr Charles Tony Ngwenya

November 2025

DECLARATION

I, Thando Nxele, declare that:

- i. The research reported in this dissertation/thesis, except where otherwise indicated, is my original work.
- ii. This dissertation/thesis has not been submitted for any degree or examination at any other university.
- iii. This dissertation/thesis does not contain other person's data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
- iv. This dissertation/thesis does not contain other person's writing, unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then:
 - a) their words have been rewritten, but the general information attributed to them has been referenced.
 - b) where their exact words have been used, their writing has been placed inside quotation marks, and referenced.
- v. This dissertation/thesis does not contain text, graphs or tables copied and pasted from the internet, unless specifically acknowledged, and the source being detailed in the dissertation/thesis and in the reference list.

Signature: _____

Date: 16 April 2026

ABSTRACT

This study examined the effectiveness of AgriSETA-accredited learnerships in developing technical and entrepreneurial capabilities among trainees in the Eastern Cape Province. It further investigated the extent to which these competencies were translated into sustainable post-training employment or enterprise activity. Guided by Institutional Theory, the Resource-Based View, the Functional Theory of Value, and the Unified Theory of Acceptance and Use of Technology, the study adopted an explanatory sequential mixed-methods design. A survey of 230 former learners identified patterns in competence development and early post-training outcomes, followed by semi-structured interviews with facilitators, host employers, and AgriSETA officials that explored how competencies were interpreted and applied within real-world agricultural production and training environments.

The findings indicate that the learnerships consistently strengthened technical agricultural skills, which emerged as the most stable and reliably achieved outcome. Entrepreneurial and digital competencies were less consistently developed and more difficult for trainees to apply independently. Structural constraints, including limited access to finance, insecure production space, weak market linkages, and the absence of structured post-training support, significantly restricted the transition from competence to sustainable economic participation. These conditions help explain the limited predictive strength of competence variables in the regression analysis.

The study contributes theoretically by integrating Institutional Theory, the Resource-Based View, the Functional Theory of Value, and UTAUT to explain how capability, opportunity and support interact within vocational training systems. Methodologically, it demonstrates the value of mixed-methods designs for identifying how structural conditions shape learner trajectories in rural and resource-constrained settings. Empirically, it provides rare, context-specific evidence on the outcomes of agricultural learnerships in the Eastern Cape Province. Practically, it offers recommendations for strengthening curriculum integration, facilitator preparation, institutional coordination, and post-training support mechanisms. A framework is proposed to illustrate how technical competence must align with opportunity structures and ongoing support for skills development programs to yield meaningful and sustained post-training progression.

ACKNOWLEDGEMENTS

- I express my sincere gratitude to Dr Tony Ngwenya for his continued support, guidance and mentorship throughout this journey. His patience, encouragement and commitment to academic excellence strengthened both the study and my own growth. May he be blessed in abundance.
- I extend heartfelt thanks to oNdala and aMazima, especially my mother. Thank you for transforming pain, anger and fear into harmony, love and family. Your strength and grace have anchored me in every season.
- I am grateful to the AgriSETA officials, training providers, host employers and learners who participated in this study. Their willingness to share their time and experiences made this research possible.
- My appreciation also goes to the University of KwaZulu-Natal for allowing me to travel to Germany.
- Lastly, I acknowledge my family and friends for their understanding, patience and unwavering belief in me. Their support carried me through the long hours and demanding moments required to complete this thesis.

DEDICATION

This work is lovingly dedicated to my daughters, **Onwaba and Cwango**.

May you always play to your strengths, step confidently into every opportunity, and shape futures that honour your courage and potential. May you remain grounded in kindness, bold in ambition, and unwavering in the belief that you are capable of becoming everything you choose to be.

TABLE OF CONTENTS

DECLARATION	i
ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
DEDICATION	iv
TABLE OF CONTENTS	v
LIST OF TABLES	xix
LIST OF FIGURES	xx
LIST OF ACRONYMS	xxi
CHAPTER 1: INTRODUCTION AND BACKGROUND OF THE STUDY	1
1.1 INTRODUCTION	1
1.2 BACKGROUND OF THE STUDY	2
1.3 MOTIVATION FOR THE STUDY	3
1.4 RESEARCH PROBLEM	4
1.5 AIMS OF THE STUDY	5
1.6 OBJECTIVES OF THE STUDY	5
1.7 HYPOTHESES OF THE STUDY	6
1.8 RESEARCH QUESTIONS	6
1.8.1 Main research question	6

1.8.2	Secondary research questions	6
1.8.3	Literature Review and Theories Adopted in the Study	7
1.9	RESEARCH DESIGN	8
1.10	RESEARCH APPROACH.....	9
1.11	RESEARCH STRATEGY	9
1.12	EXPECTED CONTRIBUTION TO THE BODY OF KNOWLEDGE	10
1.12.1	Theoretical Contribution	11
1.12.2	Empirical Contribution.....	11
1.12.3	Methodological Contribution	11
1.12.4	Practical Contribution	12
1.13	EXPECTED MANAGERIAL IMPLICATIONS	12
1.14	EXPECTED PRACTICAL IMPLICATIONS	13
1.15	CHAPTER OUTLINE	14
1.16	CHAPTER SUMMARY	15
CHAPTER 2: LITERATURE REVIEW		17
2.1	INTRODUCTION	17
2.2	DEFINITION OF ENTREPRENEURSHIP	17
2.3	THE VALUE OF EDUCATION	19
2.4	THE DRIVERS OF ENTREPRENEURSHIP EDUCATION.....	20
2.5	LEARNERSHIPS AS ENTREPRENEURSHIP EDUCATION	21

2.6	ENTREPRENEURIAL COMPETENCIES IN AGRICULTURE	22
2.6.1	Importance of Entrepreneurial Competencies in Agriculture	22
2.6.2	Key Entrepreneurial Competencies.....	22
2.6.3	Challenges in Developing Entrepreneurial Competencies.....	23
2.7	THE VALUE OF ENTREPRENEURIAL LEARNING	23
2.8	THE LEARNERSHIPS CONCEPT	25
2.8.1	Origins and Policy Rationale	26
2.8.2	Structural Features of Learnerships	26
2.8.3	Roles and Responsibilities in Delivery	27
2.8.4	Funding and Incentives	27
2.8.5	Pedagogical Foundations: Applied Competence and Integrated Assessment.....	27
2.8.6	Learnerships within the Agricultural Sector	28
2.8.7	Strengths and Persistent System Challenges.....	28
2.9	THE ROLE OF LEARNERSHIP SKILLS DEVELOPMENT	28
2.9.1	Enhancing Employee Performance	29
2.9.2	Upskilling Employees	29
2.9.3	Improving Leadership Competencies	29
2.9.4	Succession Planning and Workforce Renewal.....	30
2.10	THE LEGISLATIVE AND REGULATORY FRAMEWORK	30
2.10.1	Reconstruction and Development Programme (RDP) White Paper (1994)	30
2.10.2	Constitution of the Republic of South Africa	31
2.10.3	White Paper on Public Service Training and Education (1997)	32
2.10.4	Skills Development Act 97 of 1998	33
2.10.5	Higher Education Act and Its Implications for Learnership Governance.....	34

2.11	SKILLS DEVELOPMENT IMPLEMENTATION STRATEGIES	34
2.11.1	National Skills Development Strategy	35
2.11.2	National Skills Authority	35
2.11.3	National Skills Fund.....	36
2.11.4	Sector Education and Training Authorities (SETAs).....	37
2.11.5	Economic Imperatives of Learnerships.....	38
2.12	STRATEGIC POLICY, GOVERNANCE AND CHANGE-MANAGEMENT DRIVERS OF LEARNERSHIP EFFECTIVENESS	39
2.12.1	Alignment with National and Global Development Agendas	41
2.12.2	The Higher Education Act, Quality Assurance and Work-Integrated Learning ...	42
2.12.3	Corporate Governance and Return on Skills Investment.....	43
2.12.4	Digitalisation, Blended Learning and Online Delivery in Vocational Training ...	44
2.12.5	Change Management and the ADKAR Model in Skills System Reform	45
2.13	MACRO CONTEXT	46
2.13.1	Emerging Trends in Global Vocational Training.....	47
2.13.2	Impact of International Learnership Models on Local Practices	51
2.13.3	Sustainability Challenges in Vocational Training Programmes	53
2.13.4	Alignment with Sustainable Development Goals	55
2.13.5	Economic Impact of Learnerships	57
2.13.6	Social Impact of Learnerships.....	59
2.13.7	Environmental Impact of Learnerships	61
2.13.8	Policy and Governance Framework for Learnerships.....	62
2.14	MESO CONTEXT	63
2.14.1	Intersections Between National Development Plans and AgriSETA	64
2.14.2	Effectiveness of Public-Private Partnerships in Agri-Entrepreneurship Training	67

2.14.3	Regional Disparities in Learnership Implementation	69
2.14.4	Key Legislative and Regulatory Instruments	71
2.14.5	Institutional Structures and Stakeholder Roles in Learnership Programmes.....	72
2.14.6	Policy Implementation and Challenges in Learnership Programmes	74
2.14.7	Innovations and Best Practices in Learnership Programmes	75
2.15	MICRO CONTEXT	78
2.15.1	Technology-Driven Enhancements in Learnership Delivery.....	78
2.15.2	Cultural Influences on Trainee Engagement.....	82
2.15.3	Integration of Soft Skills in Learnership Curricula.....	83
2.15.4	Trainee Characteristics and Motivations.....	85
2.15.5	Trainee Engagement and Motivation	86
2.15.6	Role of Mentorship and Support Systems.....	87
2.15.7	Assessment and Certification.....	87
2.16	CONTRIBUTION OF LEARNERSHIPS TO SUSTAINABLE DEVELOPMENT GOALS	88
2.16.1	Advancing Inclusive and Quality Education (SDG 4).....	89
2.16.2	Supporting Decent Work, Productivity, and Economic Participation (SDG 8)....	89
2.16.3	Reducing Poverty and Strengthening Food Security (SDG 1 and SDG 2).....	89
2.16.4	Promoting Gender Equality and Reducing Structural Inequalities (SDG 5 and SDG 10)	90
2.16.5	Building Innovation Capability and Supporting Climate-Resilient Agriculture (SDG 9 and SDG 13).....	90
2.16.6	Systemic Constraints Limiting SDG Contribution	91
2.16.7	Strengthening SDG Alignment Through Policy and Practice.....	91
2.17	AFRICA VISION 2063 AND LEARNERSHIPS	92

2.17.1	Agenda 2063 and Human Capital Development.....	92
2.17.2	Aligning Agricultural Learnerships with Continental Agricultural Priorities	93
2.17.3	Partnerships, Collaboration, and Institutional Strengthening	93
2.17.4	Learnerships as Catalysts for Youth Empowerment and Inclusive Growth	93
2.17.5	Constraints Limiting Alignment with Agenda 2063	94
2.17.6	Strengthening Learnership Alignment with Agenda 2063.....	94
2.18	CONSTRAINTS OF CURRENT LEARNERSHIPS IN PROMOTING ENTREPRENEURIAL SKILLS	95
2.18.1	Lack of Entrepreneurial Mindset and Applied Competencies	96
2.18.2	Constricted Entrepreneurial Ecosystem	96
2.18.3	Weak Mentorship and Support Structures	96
2.18.4	Funding and Resource Constraints	97
2.18.5	Implementation Challenges in Learnership Delivery	97
2.18.6	Insufficient Pedagogical Content Knowledge.....	97
2.18.7	Limited Labour Market and Post-Training Absorption	97
2.19	IMPACT OF LEARNERSHIPS IN FACILITATING ENTRY INTO THE COMMERCIALISATION SPACE	98
2.20	COLLABORATION OF ENTREPRENEURSHIP, INNOVATION, AND DIGITALISATION CURRICULUM.....	100
2.21	THE ROLE OF ENTREPRENEURSHIP CURRICULUM IN ACCELERATING MARKET ABSORPTION OPPORTUNITIES	102
2.22	ENVIRONMENT FOR EFFECTIVE ENTREPRENEURSHIP EDUCATION	104
2.23	CONCEPTUALISING ENTREPRENEURIAL GROWTH	105
2.24	RESEARCH GAPS.....	106

2.24.1	Critical Gaps in Current Literature on AgriSETA Learnerships	107
2.24.2	Future Directions for Vocational Training Research	108
2.25	CHAPTER SUMMARY	109
CHAPTER 3: THEORETICAL FRAMEWORK		111
3.1	INTRODUCTION TO THE THEORETICAL FRAMEWORK	111
3.2	INSTITUTIONAL THEORY: HISTORICAL PERSPECTIVE	112
3.2.1	Constructs of Institutional Theory	113
3.2.2	Application of Institutional Theory to Learnerships	114
3.3	THE FUNCTIONAL THEORY OF VALUE	115
3.3.1	Functional Value	115
3.3.2	Social Value	115
3.3.3	Emotional Value	116
3.3.4	Conditional Value	116
3.3.5	Applying the Functional Theory of Value to AgriSETA Learnerships	116
3.3.6	Value Outcomes in Learnership Programmes	116
3.4	RESOURCE-BASED THEORY	118
3.4.1	Application of Resource-Based Theory	118
3.4.2	Integration of Resource-Based Theory and Vocational Education	119
3.5	UNIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY	120
3.6	INTEGRATED CONCEPTUAL FRAMEWORK	122
3.7	CHAPTER SUMMARY	125
CHAPTER 4: RESEARCH METHODOLOGY		126

4.1	INTRODUCTION	126
4.2	RESEARCH PARADIGM (PRAGMATISM)	126
4.3	RESEARCH PHILOSOPHIES	127
4.4	RESEARCH DESIGN	127
4.4.1	Work-Integrated Learning as a Methodological Orientation	128
4.4.2	Quantitative Method.....	129
4.4.3	Qualitative Method.....	129
4.4.4	Cross-Sectional Research Design	130
4.4.5	Mixed Method Research (MMR) Design	130
4.4.6	Rationale for Adoption of Mixed Methods.....	131
4.4.7	Sequential Explanatory Strategy	132
4.5	STUDY POPULATION	133
4.6	SAMPLING METHODS	133
4.6.1	Non-probability Sampling.....	134
4.6.2	Probability Sampling.....	134
4.6.3	Selected Sampling Method	134
4.6.4	Sampling Techniques for This Study	135
4.7	SAMPLE SIZE	135
4.8	DATA COLLECTION INSTRUMENTS	136
4.9	PILOT STUDY	136
4.10	ADMINISTRATION OF RESEARCH INSTRUMENTS	137
4.11	RELIABILITY AND VALIDITY	137

4.11.1	Reliability and Validity in the Quantitative Phase.....	138
4.11.2	Trustworthiness in the Qualitative Phase.....	138
4.12	DATA ANALYSIS METHOD.....	139
4.13	ELIMINATION OF BIAS	139
4.14	ETHICAL CONSIDERATIONS	140
4.15	CHAPTER SUMMARY	140
CHAPTER 5: QUANTITATIVE DATA ANALYSIS AND RESULTS.....		142
5.1	INTRODUCTION	142
5.2	PRESENTATION OF RESULTS: DEMOGRAPHICS.....	143
5.3	MEASUREMENT RELIABILITY AND VALIDITY.....	144
5.3.1	Reliability Analysis.....	145
5.3.2	Validity Assessment.....	146
5.4	DESCRIPTIVE ANALYSIS OF KEY CONSTRUCTS	147
5.4.1	OBJECTIVE 1: ASSESS PERCEIVED QUALITY AND RELEVANCE OF THE AGRISETA LEARNERSHIP FOR AGRICULTURAL ENTREPRENEURSHIP.....	148
5.4.2	OBJECTIVE 2: EVALUATE GAINS IN TECHNICAL AND BUSINESS SKILLS THAT SUPPORT SELF-EMPLOYMENT AND ENTERPRISE GROWTH.....	150
5.4.2	OBJECTIVE 3: EXAMINE RESPONSIVENESS TO EMERGING TRENDS, INCLUDING DIGITALISATION, INNOVATION, COLLABORATION, AND CLIMATE-SMART PRACTICES.....	151
5.4.3	OBJECTIVE 4: DETERMINE LINKS BETWEEN PROGRAMME PARTICIPATION AND ENTREPRENEURIAL OUTCOMES, ESPECIALLY START-UP AND SUSTAINABILITY, IN THE EASTERN CAPE PROVINCE.	154

5.5	INFERENTIAL ANALYSIS	158
5.5.1	Correlation Analysis.....	159
5.5.2	Analysis of Variance (ANOVA).....	162
5.5.3	Regression Analysis	163
5.5.4	Associations between Start-Up and Categorical Factors	164
5.6	CHAPTER SUMMARY	165
CHAPTER 6: QUALITATIVE DATA ANALYSIS AND RESULTS.....		167
6.1	INTRODUCTION	167
6.2	SAMPLE DESCRIPTION	168
6.3	DATA COLLECTION PROCEDURE.....	168
6.4	TRUSTWORTHINESS OF THE QUALITATIVE FINDINGS	168
6.5	CODING AND ANALYSIS.....	169
6.6	DATA SATURATION	169
6.7	METHODOLOGICAL TRIANGULATION	169
6.8	EXPLANATORY SEQUENTIAL DESIGN POSITIONING	169
6.9	OBJECTIVE I: SKILLS AND COMPETENCIES.....	170
6.9.1	Technical Skills.....	170
6.9.2	Business Competencies	172
6.9.3	Soft Skills	174
6.9.4	Digital Skills	175
6.10	OBJECTIVE II: CONSTRAINTS AND BARRIERS.....	177
6.10.1	Financial and Resource Constraints	178

6.10.2	Post-Training Support Gap	178
6.10.3	Structural and Contextual Barriers.....	179
6.11	SUBSIDIARY OBJECTIVE IV: INSTITUTIONAL CONDITIONS SHAPING PROGRAMME EFFECTIVENESS	180
6.11.1	Organisational Roles, Mandates and Resource Allocation	180
6.11.2	Monitoring, Evaluation and Outcome Accountability	181
6.12	SUBSIDIARY OBJECTIVE II: CURRICULUM RESPONSIVENESS AND TECHNOLOGICAL MODERNISATION.....	183
6.12.1	Alignment with Evolving Market Demands	183
6.12.2	Technological Modernisation and Digital Competency Integration.....	184
6.13	SUBSIDIARY OBJECTIVE V: PARTNERSHIP ECOSYSTEMS AND PROGRAMME EFFECTIVENESS	185
6.13.1	Government Coordination and Enabling Policy Environments.....	186
6.13.2	Industry Engagement and Workplace Learning Pathways	186
6.13.3	Academic Partnerships and Knowledge-Driven Curriculum Renewal.....	187
6.14	SUBSIDIARY OBJECTIVE IV: MARKET ABSORPTION AND SUSTAINABILITY OF ENTREPRENEURIAL OUTCOMES	188
6.14.1	Absorption into Formal Employment	188
6.14.2	Entrepreneurial Pathways Following Programme Completion.....	189
6.14.3	Sustainability of Post-Training Outcomes	190
6.15	INTEGRATED ANALYSIS OF LEARNERSHIP EFFECTIVENESS AND ENTREPRENEURIAL TRANSITION	191
6.16	CHAPTER SUMMARY	192
CHAPTER 7: DISCUSSION AND TRIANGULATION OF FINDINGS.....		194

7.1	INTRODUCTION	194
7.2	RATIONALE FOR TRIANGULATION	194
7.3	OVERVIEW OF KEY FINDINGS	195
7.4	OBJECTIVE I: SKILLS AND COMPETENCIES.....	196
7.4.1	Technical Skills.....	197
7.4.2	Business and Entrepreneurial Competencies	198
7.5	OBJECTIVE II: CONSTRAINTS AND SYSTEMIC BARRIERS	199
7.5.1	Access to Finance.....	199
7.5.2	Post-Training Support and Institutional Follow-Through.....	200
7.5.3	Resource Constraints and Entrepreneurial Transition.....	201
7.6	OBJECTIVE III: CURRICULUM, INNOVATION, AND DIGITAL INTEGRATION.....	202
7.6.1	Curriculum Relevance and Alignment.....	202
7.6.2	Instructional Consistency and Delivery Variation	203
7.6.3	Digital and Innovation Integration	204
7.7	OBJECTIVE IV: MARKET ABSORPTION AND SUSTAINABILITY	205
7.7.1	Employment Pathways.....	205
7.7.2	Enterprise Attempts and Continuity.....	206
7.7.3	Conditions Influencing Sustainability.....	207
7.8	CROSS-CUTTING SYNTHESIS.....	207
7.9	IMPLICATIONS	208
7.9.1	Policy Implications	208
7.9.2	Programme and Practice Implications	209
7.9.3	Post-Training Support Systems.....	209

7.9.4	Implications for Future Research	210
7.10	RECOMMENDATIONS	210
7.10.1	Strengthening Post-Training Support.....	211
7.10.2	Improving Access to Finance.....	211
7.10.3	Enhancing Curriculum Integration.....	211
7.10.4	Standardising Facilitation and Instruction	211
7.10.5	Addressing Infrastructure and Production Constraints	212
7.10.6	Improving Market Access	212
7.10.7	System-Level Coordination	212
7.11	CONTRIBUTION TO THE BODY OF KNOWLEDGE.....	213
7.11.1	Theoretical Contribution	213
7.11.2	Methodological Contribution.....	214
7.11.3	Empirical Contribution.....	214
7.11.4	Practical and Policy Contribution	214
7.12	LIMITATIONS OF THE STUDY	215
7.12.1	Geographic and Sector Scope	216
7.12.2	Sampling and Participation Constraints	217
7.12.3	Self-Reported Data Limitations	217
7.12.4	Timing of Data Collection	217
7.12.5	Resource and Context Constraints	217
7.13	PROPOSED FRAMEWORK	218
7.13.1	Rationale for the Framework	218
7.13.2	Components of the Framework.....	219
7.13.3	Framework Illustration.....	219
7.13.4	Explanation of the Framework.....	220

7.13.5	Implications of the Framework	220
7.14	CONCLUSION	221
	REFERENCES	222
	ANNEXURES	274
	INFORMED CONSENT LETTER.....	274
	QUESTIONNAIRE FOR AGRISETA LEARNERSHIP PARTICIPANTS	277
	INTERVIEW GUIDE	283
	GATEKEEPERS LETTER	286
	LOVEDALE CONFIRMATION LETTER	287
	ETHICAL CLEARANCE.....	288

LIST OF TABLES

Table 1: Demographic Profile of Respondents (N = 230)	144
Table 2: Reliability Statistics for Composite Measures.....	146
Table 3: Curriculum Index Item Diagnostics.....	146

LIST OF FIGURES

Figure 1: The Entrepreneurial Learning Cycle	25
Figure 2: Alignment of AgriSETA Learnership Outcomes with Relevant SDGs	56
Figure 3: Constraints to promoting entrepreneurial skills	95
Figure 4: Functional Theory of Value	115
Figure 5: Integrated Conceptual Framework.	124
Figure 6: Mean Score for Training Quality	148
Figure 7: Mean Score for Curriculum Relevance	149
Figure 8: Mean Score for Technical Agricultural Skills.....	150
Figure 9: Mean Score for General Business Competencies.....	151
Figure 10: Mean Score for Digital and Climate-Smart Practices	152
Figure 11: Mean Score for Entrepreneurial Confidence.....	153
Figure 12: Mean Score for Collaboration	154
Figure 13: Start-Up Participation Status	155
Figure 14: Time to Start a Business After Training.....	156
Figure 15: Programme Type Distribution Among Business Starters	156
Figure 16: Programme Year Distribution Among Business Starters.....	157
Figure 17: Mean Comparison Graph Between Starters and Non-Starters.....	158
Figure 18: Correlation Heatmap for Key Constructs.....	161
Figure 19: Mean Differences in Digital and Climate-Smart Practices by Education Level	162
Figure 20: Standardised Coefficients with 95% Confidence Intervals	163
Figure 21: Integrated Framework for Sustainable Post-Training Entrepreneurial Progression .	220

LIST OF ACRONYMS

AR	Augmented Reality
ASED	Agricultural Skills and Enterprise Development
ECSECC	Eastern Cape Socio-Economic Consultative Council
FET	Further Education and Training
HEI	Higher Education Institution
IoT	Internet of Things
IPAP	Industrial Policy Action Plan
ML	Machine Learning
M&E	Monitoring and Evaluation
NDP	National Development Plan
NGO	Non-Governmental Organisation
NSDS	National Skills Development Strategy
OECD	Organisation for Economic Co-operation and Development
RBV	Resource-Based View
RDP	Reconstruction and Development Programme
SAQA	South African Qualifications Authority
SDG	Sustainable Development Goal
SETA	Sector Education and Training Authority
SMME	Small, Medium and Micro Enterprise
TAFE	Technical and Further Education
TVET	Technical and Vocational Education and Training
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UTAUT	Unified Theory of Acceptance and Use of Technology
VR	Virtual Reality
VET	Vocational Education and Training
WIL	Work-Integrated Learning

CHAPTER 1: INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 INTRODUCTION

South Africa continues to face persistent challenges in aligning its education and training systems with the demands of a rapidly evolving economy. Despite significant investment in skills development, unemployment, particularly among young people, remains critically high (Mseleku, 2024). This mismatch between training outputs and labour market needs has weakened national efforts to promote entrepreneurship and inclusive economic participation.

Sector Education and Training Authorities (SETAs) were established through the Skills Development Act 97 of 1998 to strengthen the relevance and impact of vocational programmes (W&R SETA, 2024). Among these, the Agriculture Sector Education and Training Authority (AgriSETA) plays a central role in developing technical and entrepreneurial capability within the agricultural sector. Its mandate includes supporting employability, strengthening productivity, and advancing the development of emerging farmers (AgriSETA, 2024).

However, evidence suggests that despite substantial state funding, AgriSETA learnerships have not consistently translated into sustainable entrepreneurial outcomes. Many graduates struggle to access markets, secure employment, or establish viable enterprises after completing training (AgriSETA, 2023). These outcomes reflect persistent constraints, including limited post-training support, restricted access to finance and land, variable workplace exposure, and uneven programme implementation.

Entrepreneurship remains a national priority, particularly in rural provinces such as the Eastern Cape, where agricultural activity is central to local livelihoods and economic participation (EC Department of Agriculture, 2025). However, research suggests that current learnerships often emphasise technical training without sufficiently embedding business development, innovation, or digital competencies, which are increasingly required in modern agriculture (Mtotywa & Motaung, 2024).

This study examines the effectiveness of AgriSETA-accredited learnerships in promoting entrepreneurial growth in the Eastern Cape Province. It evaluates how programme design, learner experiences, institutional mechanisms, and contextual conditions shape training outcomes. An explanatory sequential mixed-methods design underpins the research, combining

quantitative patterns with qualitative insights to provide a comprehensive understanding of learnership effectiveness.

The study draws on four theoretical perspectives: Institutional Theory, the Resource-Based View (RBV), the Functional Theory of Value, and the Unified Theory of Acceptance and Use of Technology (UTAUT). Together, these theories offer a structured lens for analysing how institutional arrangements, resource endowments, programme value, and technology adoption influence entrepreneurial outcomes (Kar, 2025).

This chapter introduces the rationale for the study, outlines the research problem, and presents the aims, objectives, research questions, expected contributions, and structure of the thesis.

1.2 BACKGROUND OF THE STUDY

South Africa continues to experience severe structural unemployment despite sustained investment in human capital development and vocational training (Stat SA, 2025). Youth unemployment remains above 60%, reflecting a persistent mismatch between educational outputs and labour market absorption. These conditions have strengthened the national emphasis on demand-driven skills development, workplace learning, and sector-based training interventions.

The Skills Development Act 97 of 1998 established the framework for Sector Education and Training Authorities (SETAs), intended to improve the relevance, quality, and labour market responsiveness of vocational programmes (Botha & Havemann, 2025). Within this system, AgriSETA plays a strategic role in supporting agricultural productivity, food security, and the development of emerging farmers. Its learnerships combine structured theoretical instruction with practical workplace exposure, enabling trainees to acquire technical competence and foundational entrepreneurial awareness.

However, national and provincial evaluations indicate that the transition from training to economic participation remains uneven. While many graduates report gains in technical knowledge, only a limited proportion progress into sustainable self-employment or secure agricultural employment (Rogan et al., 2020). Constraints include weak post-training support, limited market access, restricted access to land and finance, and fragmented institutional coordination. These challenges are particularly pronounced in rural settings.

The Eastern Cape Province provides a relevant context for examining these dynamics. The province has a strong agricultural base, yet faces persistent poverty, limited infrastructure, and constrained agricultural value chains (Nontu et al., 2024). Learnerships have the potential to strengthen local livelihoods, but their effectiveness depends on institutional coherence, curriculum relevance, and the availability of enabling resources.

From a theoretical perspective, there is limited integration of institutional, behavioural, and resource-based explanations of learnership outcomes within the agricultural sector. Existing studies often focus on enrolment and completion rates rather than the mechanisms that support or hinder entrepreneurial progression (Seti et al., 2025). This study addresses this gap by examining how institutional structures, programme design, learner competencies, and contextual factors interact to influence post-training outcomes.

This background provides the foundation for the research problem, demonstrating the need for an evidence-based evaluation of AgriSETA-accredited learnerships and their contribution to entrepreneurial development in the Eastern Cape Province.

1.3 MOTIVATION FOR THE STUDY

This study is motivated by the persistent gap between South Africa's skills development efforts and the country's long-term economic participation outcomes. Despite substantial public investment in vocational training, including learnerships, evidence shows that a significant proportion of graduates do not transition into sustainable employment or entrepreneurial activity (Chowa et al., 2025). This raises critical questions about the relevance, design, and implementation of existing programmes, particularly within the agricultural sector.

The agricultural sector is central to national economic development, social stability, and rural livelihoods. AgriSETA learnerships were introduced to strengthen technical capabilities, support emerging farmers, and expand entrepreneurial participation across the agricultural value chain. However, available research suggests that many graduates struggle to leverage these skills in a meaningful economic way (Rabie & Cornelissen, 2023). Weak post-training support, limited access to land and finance, insufficient mentorship, and fragmented institutional coordination contribute to constrained outcomes.

From an academic standpoint, there is a clear need to deepen empirical understanding of how

learnerships influence entrepreneurial intentions, readiness, and long-term progression. Existing studies often focus on compliance, enrolment, or satisfaction metrics, rather than on the broader institutional and contextual mechanisms that shape entrepreneurial capability (Nevondwe & Ngwenya, 2025). There is also limited integration of multi-level theoretical perspectives that link individual competencies to institutional structures and enabling environments.

The motivation for this study, therefore, rests on three considerations. First, evaluating learnership effectiveness is essential to strengthening South Africa's broader skills development strategy. Second, examining these programmes in the Eastern Cape Province offers insight into how rural and resource-constrained contexts influence training outcomes. Third, analysing learnerships through a combined institutional, resource-based, behavioural, and value-oriented lens provides an opportunity to advance theoretical understanding of entrepreneurship education within vocational settings.

This study is motivated by a commitment to generating evidence that can inform policy refinement, institutional improvement, and programme design, while contributing to the broader scholarly debate on skills development and entrepreneurship in South Africa.

1.4 RESEARCH PROBLEM

AgriSETA learnerships are designed to support both employability and entrepreneurship within the agricultural sector; however, the extent to which these programmes lead to sustainable entrepreneurial outcomes remains unclear. Although trainees often report gains in technical competence, the limited evidence suggests that successful transitions into viable enterprise creation or long-term economic participation are not always achieved (Rabie & Cornelissen, 2023). This suggests a misalignment between programme design, learner needs, and the broader institutional and contextual conditions required for entrepreneurship.

Existing literature highlights several constraints that hinder post-training progression, including limited access to land and finance, insufficient post-training support, weak institutional coordination, and variability in workplace exposure (Chipfupa et al., 2023). These structural barriers significantly affect the ability of learners, particularly those in rural provinces such as the Eastern Cape, to convert training into meaningful livelihood opportunities.

At the same time, theoretical analyses of learnerships often treat them as discrete training

interventions rather than as components of a broader institutional and economic ecosystem. As a result, there is an inadequate understanding of how competencies, resource availability, institutional arrangements, technology adoption, and learner perceptions interact to shape entrepreneurial outcomes (Rabie & Cornelissen, 2023).

The core research problem is that the effectiveness of AgriSETA-accredited learnerships in promoting entrepreneurial growth in the Eastern Cape Province has not been sufficiently examined. There is limited empirical evidence and limited theoretical integration explaining whether these programmes provide the competencies, support, and enabling conditions required for trainees to initiate and sustain entrepreneurial activity. Addressing this gap is essential for enhancing the value, relevance, and impact of South Africa's skills development system.

1.5 AIMS OF THE STUDY

This study aims to evaluate the effectiveness of AgriSETA learnership programmes in facilitating entrepreneurial progression among participants in the Eastern Cape Province, South Africa. The study examines how participation in learnership training contributes to competency development and how programme design, institutional conditions, and resource constraints influence the translation of acquired competencies into sustainable entrepreneurial outcomes.

1.6 OBJECTIVES OF THE STUDY

- i. To determine the extent to which participation in AgriSETA learnership programmes significantly enhances technical, business, and entrepreneurial competencies among programme beneficiaries.
- ii. To analyse how programme design and delivery factors, including training quality, curriculum relevance, workplace exposure, and support mechanisms, influence variations in competency development outcomes.
- iii. To examine the moderating role of individual resources and structural conditions, including access to finance, production assets, networks, and institutional support, in shaping participants' transition from training participation to entrepreneurial engagement.
- iv. To evaluate the predictive relationship between competency development, contextual

constraints, and post-training entrepreneurial outcomes, including enterprise initiation, employment pathways, and sustainability of economic participation.

1.7 HYPOTHESES OF THE STUDY

In line with the explanatory sequential mixed-methods design and the use of inferential statistical analysis in the quantitative phase, the study formulates the following hypotheses derived from the theoretical framework.

- i. H1: Participation in AgriSETA learnership programmes is positively associated with higher levels of technical, business, and entrepreneurial competency development among beneficiaries.
- ii. H2: Programme design and delivery factors, including training quality, curriculum relevance, workplace exposure, and support mechanisms, significantly predict variations in competency development outcomes.
- iii. H3: Access to individual and institutional resources, including finance, productive assets, networks, and support structures, moderates the relationship between competency development and entrepreneurial engagement.
- iv. H4: Higher levels of competency development significantly increase the likelihood of post-training entrepreneurial outcomes, including enterprise initiation, employment absorption, and sustained economic participation.

1.8 RESEARCH QUESTIONS

1.8.1 Main research question

To what extent do AgriSETA learnership programmes facilitate entrepreneurial progression through competency development under varying programme design and structural conditions?

1.8.2 Secondary research questions

- i. What programme-related constraints influence the effectiveness of learnership training in developing entrepreneurial competencies?

- ii. How do structural and contextual limitations affect participants' transition into entrepreneurial activity and commercialisation pathways?
- iii. How does the integration of entrepreneurship, innovation, and digitalisation within the curriculum influence entrepreneurial readiness?
- iv. What role does entrepreneurship education play in enhancing market absorption and sustainable livelihood opportunities?

1.8.3 Literature Review and Theories Adopted in the Study

The study is grounded in a comprehensive review of literature on skills development, entrepreneurship education, and vocational training within the South African context. The review identifies a persistent gap between policy intentions and programme outcomes, particularly regarding the ability of SETA learnerships to generate sustainable entrepreneurial activity (O'Neil et al., 2023).

To interpret these dynamics, the study adopts an integrative theoretical framework that combines four complementary perspectives:

- Institutional Theory, which explains how organisational structures, policy frameworks, and social norms influence the design and performance of learnership programmes (O'Neil et al., 2023).
- The Resource-Based View (RBV), which examines how access to tangible and intangible resources determines learners' capacity to establish and sustain enterprises (Colombo et al., 2024).
- The Functional Theory of Value, which focuses on the perceived value and relevance of training in shaping learner motivation and engagement (Ludwiczak, 2025).
- The Unified Theory of Acceptance and Use of Technology (UTAUT), which accounts for how technology adoption, innovation, and digital literacy affect learners' entrepreneurial readiness (Larasati et al., 2024).

These theories jointly enable a multi-level understanding of the factors influencing AgriSETA

learnership outcomes, integrating macro-level institutional conditions, meso-level organisational practices, and micro-level learner experiences. The review of related studies further highlights gaps in the empirical assessment of these relationships, particularly within the agricultural sector of the Eastern Cape Province, thereby reinforcing the relevance and originality of this research.

1.9 RESEARCH DESIGN

This study adopted an explanatory sequential mixed-methods design, selected for its ability to provide both breadth and depth in evaluating the effectiveness of AgriSETA-accredited learnerships. The design aligns with the study's pragmatic orientation, which prioritises the research problem and practical outcomes over strict adherence to a single methodological paradigm (Draucker et al., 2020).

The research was conducted in two phases. The quantitative phase was undertaken first and involved collecting structured survey data from AgriSETA learnership participants. This phase identified patterns in learner competencies, training experiences, and post-training outcomes, providing an empirical overview of programme performance.

The qualitative phase followed and was informed directly by the quantitative results. Semi-structured interviews were conducted with facilitators, host employers, and AgriSETA officials to explore the institutional, structural, and contextual factors underlying the quantitative trends. This phase provided nuanced insight into how programme design and implementation shape learner experiences and entrepreneurial progression.

The final stage involved integrating both strands of data through triangulation to generate a comprehensive interpretation of learnership effectiveness. This design enabled the qualitative findings to explain and deepen the quantitative results, ensuring both analytical coherence and robustness (Oranga, 2025).

The explanatory sequential approach was appropriate for the study because AgriSETA learnership outcomes are shaped by both measurable competencies and contextual conditions that require deeper interpretive analysis. The design, therefore, supported the development of evidence-based recommendations grounded in both statistical patterns and stakeholder perspectives.

1.10 RESEARCH APPROACH

The study was guided by a pragmatic research approach, which prioritises practical problem-solving and the generation of evidence that supports real-world decision-making. Pragmatism is suitable for this investigation because it allows the integration of quantitative and qualitative methods to address complex questions about learnership effectiveness that cannot be answered through a single methodological lens (Ahmed et al., 2024).

Pragmatism recognises that vocational training and entrepreneurship development involve interactions between institutional structures, learner agency, and contextual conditions. A flexible and mixed-methods approach is therefore required to understand the multifaceted nature of learnership outcomes. Within this study, pragmatism provided the basis for selecting methods that best illuminated the research problem rather than adhering to philosophical purity.

The study followed an explanatory sequential logic. Quantitative data were collected first to measure learner competencies, programme experiences, and post-training outcomes. These initial results then informed the design of the qualitative phase, ensuring that interviews explored the underlying institutional and contextual factors affecting the observed quantitative patterns. The combination of these methods enabled greater analytical depth and strengthened the trustworthiness of the findings (Chu et al., 2023).

The pragmatic orientation also aligns with the theoretical framework, which integrates Institutional Theory, the Resource-Based View, the Functional Theory of Value, and the Unified Theory of Acceptance and Use of Technology. Each theory contributes a distinct analytical lens, and pragmatism supports their synthesis to address the practical complexities of learnership implementation and entrepreneurial progression.

1.11 RESEARCH STRATEGY

The research strategy was developed to operationalise the explanatory sequential mixed-methods design in a coherent and context-sensitive manner. The strategy ensured that each phase of the study addressed specific objectives while contributing to a unified evaluation of AgriSETA learnership effectiveness.

The strategy unfolded across three interconnected phases.

- **Phase 1: Quantitative Data Collection and Analysis**

The first phase involved administering structured questionnaires to AgriSETA learnership participants. The survey captured demographic information, learner experiences, entrepreneurial competencies, confidence levels, and post-training outcomes. Descriptive and inferential statistical analyses were conducted to identify patterns and relationships central to the study's objectives (Bihi, 2022).

- **Phase 2: Qualitative Data Collection and Analysis**

The quantitative findings informed the second phase of the study. Semi-structured interviews were conducted with facilitators, host employers, and AgriSETA officials to explore institutional practices, resource constraints, and contextual conditions underlying the quantitative trends. Thematic analysis was used to interpret the data and provide deeper insight into learner progression and systemic challenges (Ahmed et al., 2024)

- **Phase 3: Integration and Interpretation of Findings**

The final phase synthesised the quantitative and qualitative results through methodological triangulation. This integration enabled a comprehensive understanding of learnership effectiveness by connecting measurable outcomes with contextual explanations. The synthesis also informed the development of the proposed framework and the study's recommendations (Wasti et al., 2022).

The sequential structure of the research strategy ensured methodological complementarity, strengthened analytical coherence, and supported the study's overarching aim of evaluating how AgriSETA learnerships influence entrepreneurial development in the Eastern Cape Province.

1.12 EXPECTED CONTRIBUTION TO THE BODY OF KNOWLEDGE

This study is expected to make several contributions to the academic literature on skills development, vocational training, and entrepreneurship within South Africa's agricultural sector. By examining the effectiveness of AgriSETA-accredited learnerships through a multi-theoretical and mixed-methods lens, the study advances conceptual, empirical, methodological, and practical understanding.

1.12.1 Theoretical Contribution

The study integrates four complementary theoretical perspectives: Institutional Theory, the Resource-Based View (RBV), the Functional Theory of Value, and the Unified Theory of Acceptance and Use of Technology (UTAUT). Together, these theories offer a multi-level lens for examining how institutional structures, resource access, perceived programme value, and technology adoption influence entrepreneurial outcomes (Kar, 2025).

This integrated framework moves beyond conventional analyses of SETA effectiveness that often emphasise compliance or administrative performance. It contributes theoretically by demonstrating how the interaction of structural, organisational, and individual factors shapes the development of entrepreneurship within vocational settings.

1.12.2 Empirical Contribution

Empirically, the study provides context-specific evidence on the entrepreneurial outcomes of AgriSETA learnerships in the Eastern Cape Province. It documents patterns in learner competencies, confidence, and progression while highlighting institutional and structural factors that either facilitate or constrain post-training opportunities (AgriSETA, 2025).

The findings offer new insights into the dynamics of agricultural skills development in rural and resource-constrained contexts, where limited empirical work currently exists.

1.12.3 Methodological Contribution

Methodologically, the study demonstrates the value of an explanatory sequential mixed-methods design for evaluating vocational training outcomes. The integration of quantitative and qualitative strands illustrates how measurable patterns can be deepened through interpretive analysis, offering a model that can be replicated in future research on learnerships and related interventions (Wasti et al., 2022).

This contributes to methodological discourse by demonstrating how mixed-methods designs can enhance validity, increase relevance, and improve the explanatory power of studies in vocational education.

1.12.4 Practical Contribution

Practically, the study provides evidence-based recommendations for strengthening AgriSETA programmes, particularly in terms of curriculum relevance, digital integration, institutional coordination, and post-training support. These insights are valuable to policymakers, programme managers, training providers, and host employers responsible for improving the effectiveness of agricultural learnerships (Muwaniki et al., 2022).

By linking empirical findings to practical considerations, the study supports efforts to enhance the value, responsiveness, and impact of national skills development investments.

1.13 EXPECTED MANAGERIAL IMPLICATIONS

The study is expected to generate several managerial insights that can support more effective planning, coordination, and oversight of learnership programmes within AgriSETA and other Sector Education and Training Authorities. These implications are relevant to managers, policymakers, training providers, and institutional leaders responsible for strengthening the value and impact of vocational training.

First, the findings are likely to highlight areas where programme design, implementation, and monitoring require improvement. Identifying structural and operational gaps will help managers align training delivery more closely with entrepreneurial and labour market needs, thereby enhancing the relevance and effectiveness of the programme (Molele et al., 2024).

Second, the study will guide curriculum enhancement and quality assurance. Insights into learner competencies, digital integration, and market alignment can inform the development of training models that place greater emphasis on innovation, business development, and practical application. This will support managers in strengthening curriculum coherence and ensuring that

training content remains current and industry-responsive (Seti et al., 2025).

Third, the study is expected to underscore the importance of coordinated stakeholder collaboration. Effective learnerships depend on strong partnerships between training providers, host employers, financial institutions, and government agencies. The managerial implications will therefore highlight strategies for improving these partnerships, fostering shared accountability, and enhancing post-training support systems (Semali, 2024).

Fourth, the findings will contribute to institutional capacity-building by identifying managerial practices that promote consistent programme delivery, adequate supervision, and the development of facilitator competence. This insight can inform targeted support for frontline staff and supervisors, contributing to improved programme quality at operational levels (Misko et al., 2021).

The managerial implications of this study will support decision-makers in enhancing accountability, improving programme performance, and ensuring that skills development investments yield meaningful entrepreneurial and economic outcomes.

1.14 EXPECTED PRACTICAL IMPLICATIONS

The study is expected to produce several practical insights that will benefit stakeholders involved in the design, delivery, and participation of AgriSETA-accredited learnerships. These implications extend beyond strategic decision-making to influence operational practice and learner outcomes.

First, the study will provide practical guidance for training providers and facilitators. Insights into learner competencies, curriculum relevance, and digital integration will support more effective pedagogical approaches that strengthen the link between theoretical instruction and practical application in agricultural contexts (Sephokgole et al., 2023).

Second, the findings will help host employers and mentors enhance workplace-based learning. Identifying effective post-training support mechanisms, such as structured mentorship,

incubation, and access to microfinance, will help employers design support systems that extend beyond programme completion and contribute to long-term learner progression (Manasoe et al., 2024).

Third, the study will generate practical benefits for learners by clarifying the competencies, behaviours, and strategies that support successful entrepreneurial development in the agricultural sector. This guidance can improve learners' ability to leverage available institutional resources, navigate market conditions, and pursue viable enterprise opportunities (Nade & Malamsha, 2021).

Fourth, the study's insights may support local development agencies, cooperatives, and community organisations by highlighting opportunities to leverage AgriSETA partnerships for more coordinated support of emerging agricultural entrepreneurs. Strengthening these networks can contribute to improved productivity, local economic resilience, and inclusive development (AgriSETA, 2023).

Finally, the study's findings will inform the development of monitoring and evaluation tools that track the long-term outcomes of learnerships. Establishing mechanisms to assess enterprise performance, employment transitions, and income generation can help institutions refine programme design and support continuous improvement.

These practical implications will enhance the real-world impact of AgriSETA learnerships and contribute to strengthening South Africa's broader skills development system.

1.15 CHAPTER OUTLINE

This thesis is organised into seven chapters that collectively examine the effectiveness of AgriSETA-accredited learnerships in promoting entrepreneurial growth in the Eastern Cape Province. Each chapter builds logically on the previous one to ensure coherence and a clear analytical progression.

Chapter 1: Introduction and Background of the Study

This chapter outlines the context, motivation, research problem, aims, objectives, research

questions, theoretical orientation, and methodological foundation of the study. It also presents the expected contributions and sets out the overall structure of the thesis.

Chapter 2: Literature Review

This chapter provides a critical examination of relevant literature on skills development, vocational training, and entrepreneurship education. It analyses the macro, meso, and micro factors influencing learnership outcomes and identifies the conceptual and empirical gaps that justify the research.

Chapter 3: Theoretical Framework

Chapter 3 presents the integrated theoretical lens guiding the study. It explains how Institutional Theory, the Resource-Based View, the Functional Theory of Value, and the Unified Theory of Acceptance and Use of Technology collectively support the analysis of learnership effectiveness.

Chapter 4: Research Methodology

This chapter outlines the research design, approach, strategy, sampling procedures, and data collection and analysis techniques. It also explains the measures taken to ensure validity, reliability, trustworthiness, and ethical compliance.

Chapter 5: Quantitative Data Analysis and Results

Chapter 5 presents the findings from the quantitative phase, reporting descriptive and inferential statistics related to learner competencies, programme experiences, and post-training outcomes.

Chapter 6: Qualitative Data Analysis and Results

This chapter presents the findings from the qualitative phase, exploring institutional, structural, and contextual factors that affect learnership implementation and entrepreneurial progression through a thematic analysis.

Chapter 7: Discussion and Integration of Findings

The final chapter synthesises the quantitative and qualitative results, discusses the implications of the integrated findings, presents recommendations, outlines the study's contribution to the body of knowledge, identifies limitations, and concludes the thesis.

1.16 CHAPTER SUMMARY

This chapter introduces the study by outlining the national and sectoral context that underpins

South Africa's ongoing efforts to link skills development with sustainable economic participation. It highlighted the strategic role of AgriSETA in strengthening technical and entrepreneurial capability within the agricultural sector. It identified the persistent gap between training provision and post-training outcomes, particularly in rural provinces such as the Eastern Cape Province.

The chapter presented the research problem, aim, objectives, and research questions that guide the study. It outlined the theoretical framework, drawing on Institutional Theory, the Resource-Based View, the Functional Theory of Value, and the Unified Theory of Acceptance and Use of Technology to support a multi-level analysis of learnership effectiveness. The explanatory sequential mixed-methods design was introduced, together with the pragmatic approach and research strategy that underpin the methodological choices.

The study's expected theoretical, empirical, methodological, managerial, and practical contributions were also described, demonstrating its relevance to both academic inquiry and skills development practice. The chapter concluded with an outline of the thesis's structure, illustrating how each subsequent chapter contributes to a systematic and coherent exploration of the research problem.

This alignment of the research problem, aim, objectives, and questions establishes the analytical direction for the study. The next chapter presents a critical review of relevant literature on skills development, entrepreneurship education, and vocational training systems, establishing the conceptual and empirical foundations for the investigation.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews the literature relevant to understanding the effectiveness of AgriSETA-accredited learnerships in promoting entrepreneurial growth. It examines global, national, institutional, and learner-level dynamics that influence vocational training outcomes, with a specific focus on skills development, entrepreneurship education, and agricultural training systems. The review situates AgriSETA learnerships within broader debates on human capital development, labour market responsiveness, and rural economic transformation (Modupe & Adesoba, 2023).

The chapter is organised around three interrelated levels of analysis. The macro context examines global shifts in vocational education, the impact of international training models, and the alignment of national skills strategies with development priorities, including the Sustainable Development Goals and the National Development Plan. The meso context examines institutional frameworks, sector policies, and the governance structures that shape learnership implementation. The micro-contextual analysis examines learner characteristics, curriculum relevance, digital integration, and practical experiences that influence entrepreneurial readiness.

By synthesising evidence from these levels, the chapter identifies conceptual and empirical gaps in existing research, particularly regarding the intersection between programme design, institutional conditions, and learner outcomes in the agricultural sector. These gaps justify the need for an integrated, mixed-methods investigation into how AgriSETA learnerships contribute to entrepreneurial capability and post-training progression in the Eastern Cape Province.

2.2 DEFINITION OF ENTREPRENEURSHIP

Defining entrepreneurship remains a contested task because the concept carries multiple academic, historical, and policy interpretations (Chakuzira et al., 2024). Early accounts often emphasised economic exchange and risk. Cantillon's eighteenth-century framing positioned the entrepreneur as an independent economic actor who purchases at certain prices and sells at uncertain ones, thereby assuming market risk (Sirůček & Džbáňková, 2024). While this perspective captures the uncertainty and decision-making inherent in entrepreneurial activity, it is too narrow to describe the range of behaviours and contexts associated with entrepreneurship

today.

Contemporary scholarship demonstrates substantial variation in how entrepreneurship is defined, reflecting disciplinary differences and evolving economic conditions (Ratten, 2023). Much of the public discourse equates entrepreneurship with small business operation or self-employment, yet this framing is reductive. Not all business owners are entrepreneurs, not all small firms behave entrepreneurially, and innovation within large organisations does not automatically constitute entrepreneurship (Al-Abri & Rahim, 2022). These inconsistencies complicate efforts to determine who qualifies as an entrepreneur and what activities fall within the realm of entrepreneurship.

Recent approaches shift towards understanding entrepreneurship as a behavioural and cognitive process. One view conceptualises entrepreneurship as an opportunity-focused mode of thinking that prioritises value creation over risk aversion (Prince et al., 2021). This aligns with research on entrepreneurial intention, which positions intention as a key predictor of entrepreneurial behaviour and opportunity recognition (Suanpong et al., 2025). Cognitive perspectives similarly argue that entrepreneurs possess distinct patterns of reasoning, judgement, and decision-making that shape how they perceive and act upon opportunities (Zhou et al., 2021).

Across these perspectives, three recurring elements appear in most definitions:

- i. The attributes and capabilities of entrepreneurs, such as opportunity recognition, innovation, and resilience.
- ii. The processes involved, including identifying opportunities, mobilising resources, and implementing new ideas.
- iii. The outcomes achieved, such as new venture creation, innovation, or social and economic value.

Because entrepreneurship encompasses individuals, processes, and outcomes, several scholars advocate for definitions that capture the entire entrepreneurial process rather than focusing on isolated characteristics or results (Chakuzira et al., 2024). Others argue that definitions should be more precise so that research and policy can reliably differentiate entrepreneurial activity from general business operations (Guttermann, 2020). Both perspectives emphasise the importance of

conceptual clarity to prevent ambiguity in empirical analysis and programme evaluations, including those within learnerships and agricultural skills development.

2.3 THE VALUE OF EDUCATION

Introductory and general education provide the essential foundations for social and economic development. Seeko (2023) notes that basic education serves as a cornerstone for progress in less developed contexts, while Brown and James (2020) confirm its long-standing role as a driver of poverty reduction and broader social development. Education also supports social cohesion and enables targeted programmatic, legal, and financial interventions by government and non-governmental actors (Mosia & Malephoto, 2023).

For developing countries seeking to remain competitive in a globalised economy, productivity improvements are crucial. Walton and Engelbrecht (2022) argue that the competency levels of human resources have a direct influence on production quality and efficiency. As globalisation accelerates structural change, expertise and knowledge have increasingly displaced manual and semi-skilled labour as the primary sources of economic value. These shifts heighten the vulnerability of unskilled and low-skilled workers, who face limited mobility in rapidly evolving labour markets (Oluwaseyi et al., 2025).

South Africa reflects the same pattern. Evidence consistently demonstrates a strong association between educational attainment and median monthly earnings, reinforcing the importance of quality education for economic mobility (Nikolov & Jimi, 2020). Within this context, AgriSETA learnerships seek to strengthen the skills and competencies of trainees entering the agricultural sector.

This study does not assume that employability alone can address South Africa's socio-economic challenges. Instead, the focus is on fostering a culture of self-employment by enabling young South Africans to develop entrepreneurial potential. The discussion, therefore, situates general education within the broader ecosystem that supports entrepreneurial activity. It positions entrepreneurship education as an essential mechanism for helping individuals recognise opportunities, develop relevant capabilities, and participate more effectively in the economy.

2.4 THE DRIVERS OF ENTREPRENEURSHIP EDUCATION

The literature identifies three broad perspectives on the factors that drive entrepreneurship education, the first of which posits that economic imperatives are the central driver. Dichaba (2021) notes that entrepreneurship education is commonly understood as a response to unemployment and a mechanism for stimulating economic participation. From this perspective, its value lies in outcomes such as new venture creation, self-employment, job generation, capability development and enhanced productivity (Walton & Engelbrecht, 2022).

A second perspective argues that entrepreneurship education is shaped by underlying values and the interests of those who determine its purpose. Mukesh et al. (2024) stress the importance of interrogating what is valued, by whom, and for what reasons. Maka (2023) similarly contends that entrepreneurship education is never neutral, as its content, delivery, and direction are influenced by cultural norms, ethical considerations, ideological positions, and power relations. This view highlights the context-dependent nature of entrepreneurship education and the extent to which stakeholder values shape its meaning and implementation.

A third perspective draws on Allan Gibb's work and the educational philosophy of Alfred Whitehead. Feng and Chen (2020) argue that two elements often overlooked in formal entrepreneurship literature, energy and excitement, underpin entrepreneurial behaviour. Leong (2020) extends this argument by suggesting that these qualities act as core drivers of entrepreneurship education, influencing the engagement of learners, educators, institutions, parents and policymakers. From this standpoint, entrepreneurship education is sustained when the system generates high levels of enthusiasm and dynamism.

Whether current entrepreneurship programmes embody these qualities remains uncertain. Lekutle (2023) questions the extent to which existing models can cultivate the intensity of engagement required to develop competent and motivated entrepreneurs. This raises a broader concern about whether prevailing paradigms can support such aspirations or whether more fundamental shifts in design, delivery and purpose are necessary.

2.5 LEARNERSHIPS AS ENTREPRENEURSHIP EDUCATION

Entrepreneurship education is widely regarded as a shift away from traditional, transmission-based teaching toward approaches that foster entrepreneurial ways of thinking and acting (Thomassen, 2020). He et al. (2024) argue that it extends beyond preparing individuals to launch new ventures and includes the development of skills necessary for navigating and contributing to uncertain and evolving environments. Salam et al. (2021) similarly describe entrepreneurship education as a set of learning experiences that support the recognition of opportunities, initiative, creativity, responsibility, and calculated risk-taking.

A more behavioural view positions entrepreneurship education as the development of the attitudes, behaviours, and capabilities that underpin entrepreneurial action. Mahmudin (2023) emphasises that entrepreneurship involves adaptive and proactive behaviour in conditions of uncertainty, while Findıklı et al. (2022) highlight its relevance across commercial, social, educational, and community settings. These interpretations confirm that entrepreneurship education is not limited to business start-up training but seeks to cultivate creative problem-solving, resilience, opportunity recognition, and strategic adaptability.

Within this broader framing, AgriSETA learnerships can be understood as a form of entrepreneurship education. As SAQA-approved programmes that combine structured instruction with supervised workplace learning, they incorporate elements of learning for specific tasks, learning through pedagogical approaches that stimulate enterprising behaviour, and learning about the cognitive processes underpinning entrepreneurship (Chen et al., 2023). Even where entrepreneurship is not the explicit curricular focus, the workplace learning component exposes learners to real production environments, decision-making processes, and problem-solving demands that are foundational to entrepreneurial capability.

Learnerships, therefore, hold potential to support the development of entrepreneurial mindsets and competencies, particularly in contexts such as agriculture, where adaptability, innovation, and opportunity recognition are essential. The extent to which this potential is realised, however, depends on curriculum depth, workplace quality, and the degree to which entrepreneurial skills are intentionally embedded rather than incidental.

2.6 ENTREPRENEURIAL COMPETENCIES IN AGRICULTURE

Entrepreneurial competencies in agriculture refer to the set of skills, behaviours, and dispositions that enable individuals to manage farming enterprises effectively, navigate uncertainty, and exploit emerging opportunities. These competencies support innovation, operational efficiency, and long-term sustainability in contexts characterised by climatic volatility, fluctuating input costs, and unpredictable markets (Masoomi & Zamani, 2020).

2.6.1 Importance of Entrepreneurial Competencies in Agriculture

Agriculture remains central to South Africa's employment, food security, and rural development priorities, yet the sector faces persistent pressures. Under such conditions, entrepreneurial capability becomes essential for maintaining competitiveness. Farmers who can recognise opportunities, adopt innovations, and make informed strategic decisions are better positioned to sustain productive enterprises (O'Neil et al., 2023).

Research indicates that entrepreneurial competencies are directly linked to enhanced farm performance. Skills in decision-making, innovation, and opportunity recognition correlate with greater efficiency, more substantial resource utilisation, and enhanced profitability. Farmers who possess these competencies are more likely to diversify their income, adopt new technologies, and adapt to changing environmental or market conditions (Gadanakis, 2024). Without these capabilities, smallholders, in particular, face an elevated risk of stagnation or business failure.

2.6.2 Key Entrepreneurial Competencies

The literature identifies several competencies that underpin agricultural entrepreneurial success.

- **Opportunity competencies**

These involve identifying and acting on market gaps through diversification, value addition, or technology adoption. Despite their importance, these competencies remain underdeveloped across many farming communities (Michailidis et al., 2024).

- **Strategic competencies**

These relate to planning, goal-setting, and evaluating long-term trade-offs. Farmers with strong

strategic skills respond more effectively to market fluctuations and pursue sustainable growth when feasible (EfVET, 2024).

- **Operational competencies**

These concerns include day-to-day management, such as resource allocation, labour supervision, and coordination of farm inputs. Although many farmers manage routine activities adequately, modern production systems require ongoing upskilling (Kangogo et al., 2020).

- **Relationship competencies**

These support the ability to build networks with suppliers, buyers, extension officers, and financial institutions. Strong networks improve market access and business resilience.

- **Commitment competencies**

These relate to persistence, resilience, and goal orientation. While often strong among smallholders, they cannot compensate for gaps in strategic or opportunity-related competencies (Kangogo et al., 2020).

Together, these competencies shape the entrepreneurial orientation of agricultural enterprises and influence their capacity to innovate, grow, and withstand shocks.

2.6.3 Challenges in Developing Entrepreneurial Competencies

Despite their importance, entrepreneurial competencies remain unevenly developed. Smallholders often face structural constraints that limit access to training, credit, technology, and extension support. Uneven educational backgrounds limited financial resources, and restricted exposure to commercial farming environments further impede capability development (Pliakoura et al., 2020). These constraints exacerbate inequality and restrict the potential of vocational programmes, including AgriSETA learnerships, to foster entrepreneurship at scale unless supported by targeted and context-specific interventions.

2.7 THE VALUE OF ENTREPRENEURIAL LEARNING

Understanding the value of entrepreneurial learning is crucial for evaluating the extent to which

AgriSETA learnerships can develop the capabilities necessary for entrepreneurial success. This is particularly important in South Africa, where long-standing educational inequalities persist in shaping access to economic opportunities. Entrepreneurial learning refers to the accumulation of knowledge, skills, behaviours, and personal attributes developed through formal instruction and informal experience. Mateus and Shange (2021) emphasise that capable entrepreneurs not only acquire these competencies but also display learning-oriented habits that support effective decision-making.

A defining feature of entrepreneurial competence is the ability to reflect on experience, interpret outcomes, and develop forward-looking perspectives that inform future action. This capacity for continuous learning remains critical even in contexts characterised by limited opportunity structures (Seeko, 2023). Entrepreneurs draw insights from diverse sources, such as customers, suppliers, peers, and competitors, and refine their skills through action, experimentation, success, and failure (Mateus & Shange, 2021; Walton & Engelbrecht, 2022).

Informal learning often plays a more influential role than formal instruction. Dichaba (2021) argues that idea-sharing, networking, and peer engagement form core elements of entrepreneurial learning. Firetto and Konak (2024) further note that entrepreneurs typically learn through problem-solving in real time, with learning emerging through a reciprocal process shaped by challenge, adaptation, and discovery. Such learning is intentional rather than passive, involving deliberate selection among competing beliefs or actions.

Entrepreneurial expertise is therefore learned rather than innate. However, it only translates into competence when the supporting learning processes are structured, reflective, and accessible (Santoso et al., 2023). Entrepreneurial learning is dynamic and iterative rather than stable or linear (Thomassen, 2020). Rugpath and Mamabolo (2022) conceptualise this process as a continuous cycle of doing, reviewing, learning, and applying. This cycle, illustrated in Figure 3, highlights the experiential foundation of entrepreneurial capability development.

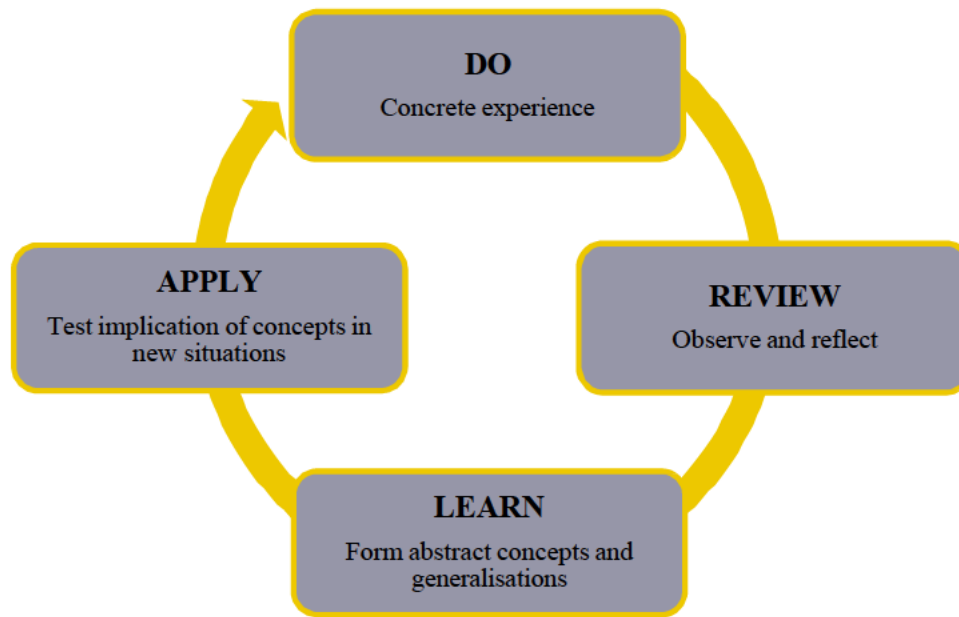


Figure 1: The Entrepreneurial Learning Cycle

Source: De Agapito et al., 2024.

Entrepreneurial learning differs from traditional pedagogical approaches that prioritise predictability and linear progression. Instead, it is shaped by discontinuity, change, and metamorphosis, where critical learning events and setbacks often serve as catalysts for development (Bell & Bell, 2020). The importance of hands-on experience as a basis for entrepreneurial growth is well established (Tshehla et al., 2021).

This entrepreneurial learning cycle aligns closely with the logic underpinning learnerships. By combining structured theoretical instruction with supervised workplace experience, learnerships create environments that facilitate experiential learning. They enable trainees to engage in practical tasks, reflect on their performance, and apply newly acquired insights. This alignment highlights the potential of AgriSETA learnerships to cultivate entrepreneurial capabilities. However, the extent of this contribution depends on the depth, consistency, and quality of experiential components embedded in programme delivery.

2.8 THE LEARNERSHIPS CONCEPT

Learnerships are a cornerstone of South Africa's post-1994 skills development strategy. They provide a structured pathway that integrates theoretical instruction with supervised workplace learning, culminating in a nationally recognised qualification registered on the National

Qualifications Framework (NQF) (Mtotywa & Motaung, 2024). Established under the Skills Development Act 97 of 1998, learnerships were designed to address historical inequities in training access, strengthen workplace learning systems, and expand opportunities for marginalised groups to acquire labour-market-relevant skills (O’Neil et al., 2023).

2.8.1 Origins and Policy Rationale

Learnerships emerged in response to the inadequacy of pre-1994 apprenticeship and in-service training systems, which were narrow in occupational focus and inaccessible primarily to Black South Africans (Botha et al., 2023). The Skills Development Act positioned learnerships as a mechanism to democratise training, strengthen industry participation, and ensure that vocational programmes were aligned with economic and sectoral needs (O’Neil et al., 2023). Their design also reflects international trends toward competency-based training, integrated assessment, and structured workplace learning.

2.8.2 Structural Features of Learnerships

A learnership has three defining components:

- a structured theoretical curriculum delivered by an accredited provider
- practical workplace learning supervised by an employer
- a qualification registered on the NQF and accredited by the QCTO or relevant quality council (White et al., 2025).

There are two primary pathways:

- Employed learnerships, where existing employees complete the programme while working
- Unemployed learnerships, where job seekers are placed with employers for the duration of the programme (SASSETA, 2025).

This tripartite arrangement between learner, provider, and employer ensures that theoretical content is reinforced through real work experience, thereby improving competence and labour

market readiness.

2.8.3 Roles and Responsibilities in Delivery

The learnership system relies on coordinated contributions from several actors:

- Employers who provide workplace exposure, mentoring, and assessment opportunities
- Training providers, who deliver accredited learning programmes and conduct formative assessments
- SETAs, which develop occupational profiles, register learnerships, quality-assure delivery, and administer grants
- Learners, who commit to both workplace and academic requirements (O’Neil et al., 2023).

A formal Learnership Agreement outlines these obligations and ensures compliance with labour legislation, health and safety requirements, and occupational standards.

2.8.4 Funding and Incentives

Learnerships are primarily financed through the Skills Development Levies Act, with employers accessing mandatory and discretionary SETA grants upon submission of Workplace Skills Plans and Annual Training Reports (Govender & Pillay, 2023). For unemployed learners, stipends provide financial support during training, addressing barriers related to transport, food, and basic participation costs.

2.8.5 Pedagogical Foundations: Applied Competence and Integrated Assessment

Learnerships are built on competency-based education principles. SAQA defines applied competence as the combination of foundational knowledge, practical ability, and reflexive capacity demonstrated in authentic work contexts (Davies, 2022). Integrated assessment combines formative and summative methods to evaluate theoretical understanding and workplace performance holistically. These assessment standards are central to AgriSETA’s approach, where trainees are expected to develop both technical agricultural skills and entrepreneurial capability

essential for small-scale and commercial farming (SAQA, 2023).

2.8.6 Learnerships within the Agricultural Sector

AgriSETA coordinates learnerships across multiple NQF levels, offering pathways for entry-level workers, emerging farmers, and those pursuing more advanced technical or agribusiness competencies (Rabie & Cornelissen, 2023). The model addresses shortcomings of earlier agricultural apprenticeships, which were limited in scope and poorly aligned to modern production systems. AgriSETA's learnerships aim to strengthen rural skills pipelines, support land reform beneficiaries, and enhance farm-level productivity through structured training that is responsive to industry needs.

2.8.7 Strengths and Persistent System Challenges

Learnerships strengthen the link between education and employment by improving workplace readiness, supporting career mobility, and enhancing employability. However, system performance remains uneven. Persistent challenges include inconsistent workplace quality, limited employer participation, uneven provider capacity, and inadequate post-training support, which restricts long-term labour market outcomes (O'Neil et al., 2023). In the agricultural sector, constraints relating to land access, market linkages, and extension services further shape the extent to which learnership graduates can apply their skills productively.

2.9 THE ROLE OF LEARNERSHIP SKILLS DEVELOPMENT

Skills development remains central to improving organisational performance and strengthening public-sector effectiveness. Continuous upskilling enables institutions to adapt to evolving service demands, improve accountability, and sustain professional competence across all levels of the workforce (Nor, 2025). Learnerships contribute directly to this agenda by providing structured opportunities for employees and job seekers to acquire relevant competencies through a blend of theoretical instruction and workplace learning.

Integrated into national and sectoral strategies, learnerships serve as accessible pathways for addressing critical skills gaps, supporting workforce renewal, and fostering long-term professional growth. The subsections below outline the key dimensions through which learnerships enhance organisational capability.

2.9.1 Enhancing Employee Performance

Inadequate employee performance remains a significant barrier to organisational productivity. Evidence shows that structured training interventions reduce performance gaps, improve service quality, and enhance operational efficiency (Nadeem Ch., 2025). Learnerships, with their competency-based design, strengthen performance by enabling employees to acquire and apply new skills in a practical, supervised environment. Studies demonstrate clear links between continuous training, job satisfaction, and improved performance outcomes across various sectors (Loqmane, 2025). Within South Africa, targeted interventions such as mentoring and coaching have been shown to correct performance deficits and contribute positively to service delivery improvements (Nama et al., 2022).

2.9.2 Upskilling Employees

Organisational adaptability depends on employees' ability to update and expand their competencies in response to changing roles, technologies, and operational conditions. Continuous training helps mitigate resistance to change, supports innovation, and enhances institutional resilience (Mokgolo et al., 2024). Effective upskilling requires well-designed training that is informed by needs assessments, relevant delivery methods, and rigorous evaluation practices. Evidence from South Africa shows that upskilling initiatives strengthen employee capacity to contribute beyond their formal job descriptions, reinforcing organisational citizenship behaviours and supporting broader institutional goals (Manenzhe & Ngirande, 2021).

2.9.3 Improving Leadership Competencies

Leadership capability is a persistent concern in the South African public sector, where weak governance systems, administrative instability, and resource inefficiencies frequently undermine service delivery (Sebola et al., 2024). Learnerships and related development programmes offer structured pathways for strengthening leadership capacity by enhancing communication, decision-making, and strategic thinking skills. Empirical studies show that leadership development improves managerial effectiveness, workplace cohesion, and staff retention (Mey et al., 2021). However, gaps remain in current municipal and sectoral leadership initiatives, highlighting the need for more context-sensitive, adequately resourced programmes aligned with organisational realities.

2.9.4 Succession Planning and Workforce Renewal

Succession planning is vital for sustaining institutional capability, particularly in sectors experiencing high turnover, ageing workforces, and persistent skills shortages. Learnerships support this process by developing structured talent pipelines and equipping emerging employees with foundational and intermediate competencies required for future roles (O’Neil et al., 2023). By aligning training interventions with organisational needs, learnerships strengthen internal mobility, reduce reliance on external recruitment, and reinforce institutional memory.

Succession strategies are strongly linked to transformation imperatives. Learnerships provide opportunities for youth, women, and historically marginalised groups to access career pathways that lead to supervisory or managerial roles, supporting employment equity and enhancing representivity (O’Neil et al., 2023). Their structured nature enables talent to be developed progressively, improving workforce stability and contributing to long-term organisational renewal.

The effectiveness of succession planning depends on coherent integration between skills development, human resource planning, and performance management systems. Weak alignment between these components limits the long-term value of learnerships, underscoring the need for stronger coordination and strategic oversight across institutions (Prayudo et al., 2025).

2.10 THE LEGISLATIVE AND REGULATORY FRAMEWORK

Learnership programmes in South Africa are built upon a series of post-1994 legislative and policy reforms designed to dismantle apartheid-era inequalities and establish an integrated national skills development system. After the democratic transition, the state prioritised human resource development, workplace training, and equitable access to skills as essential mechanisms for accelerating economic transformation. These policies laid the foundation for contemporary learnerships by establishing governance structures, funding mechanisms, and standards for occupational qualifications. The key instruments shaping this landscape are outlined in the subsections below.

2.10.1 Reconstruction and Development Programme (RDP) White Paper (1994)

The Reconstruction and Development Programme (RDP) White Paper identified human resource

development as central to rebuilding a divided society and expanding economic participation among historically marginalised groups. It positioned education, training, and capacity building as mechanisms to promote employment, enhance productivity, and reduce inequality (Khunoethe & Reddy, 2023). This early policy vision laid the conceptual groundwork for subsequent skills development legislation and the introduction of structured learnership pathways.

Although progressive in intent, the implementation of the RDP faced significant constraints. Limited institutional capacity, resource shortages, and the absence of a coherent industrial strategy all contributed to reducing its effectiveness in driving large-scale socio-economic transformation (Madzivhandila & Maswera, 2023). Research further highlights tensions between the African National Congress's redistributive ambitions and the macroeconomic liberalisation policies adopted during the same period, including privatisation and trade liberalisation, which diluted the RDP's broader developmental impact (Aboobaker, 2022).

These limitations also shaped the environment in which early skills interventions operated. Persistent unemployment, uneven spatial development, and slow economic restructuring limited the extent to which training initiatives, including vocational programmes, could translate into meaningful employment opportunities (Aboobaker, 2022). Evaluations of early RDP outcomes show that many communities continued to experience socio-economic hardship, illustrating the difficulty of achieving labour market improvements through training alone when broader economic conditions remain constrained (Franklin, 2020).

The RDP offered important lessons for future policy design. It underscored the need for strong alignment between training interventions and labour market demand, adequate resource allocation, institutional coordination, and integration of skills development within a broader industrial policy framework. These principles remain crucial for enhancing the design, implementation, and sustainability of contemporary learnerships, ensuring they effectively contribute to national development goals (World Bank, 2020).

2.10.2 Constitution of the Republic of South Africa

The Constitution provides the overarching framework for education, training, and equitable access to the labour market. Section 195(1)(h) and (i) emphasise fairness, representivity, and effective human resource development in public administration, reinforcing the importance of continuous skills enhancement and career progression (Thusi & Selepe, 2023). Section 29 affirms

the right to basic education, which underpins pathways into further and vocational learning, including learnerships (Strohwald, 2024).

Learnerships advance these constitutional commitments by expanding access to structured training, improving employability, and strengthening the link between education and economic participation (Matsheta & Sefoka, 2023). Their design, which integrates theoretical instruction with workplace learning, addresses persistent skills gaps and supports inclusion for young people, disadvantaged communities, and persons with disabilities (MerSeta, 2021; Botha et al., 2023).

Constitutional institutions, such as the South African Human Rights Commission, further safeguard the rights to education, training, and equal opportunity, ensuring that state and sectoral interventions remain aligned with the principles of equity and redress (Liebenberg, 2023). Within this environment, learnerships play a recognised role in reducing unemployment, promoting labour market access, and advancing national goals for socio-economic transformation (Strohwald, 2024).

2.10.3 White Paper on Public Service Training and Education (1997)

The White Paper on Public Service Training and Education laid the foundation for a coordinated, skills-oriented public sector in the post-apartheid era. It emphasised strategic alignment with public sector transformation, improved institutional capacity, and flexible implementation within national norms and standards (DHET, 2023). These priorities established training as a catalyst for building an efficient, representative public administration.

The White Paper anticipated a system supported by accredited programmes under the National Qualifications Framework, positioning national quality assurance as essential for consistency and improved service delivery. Importantly, it explicitly recognised learnerships as mechanisms to address skills shortages and facilitate the transition from schooling to employment, a vision later reinforced through the National Skills Development Strategy (DHET, 2023).

It also promoted partnerships between government and the private sector, emphasising collaborative workplace learning, resource sharing, and responsiveness to sector-specific needs (O’Neil et al., 2022). In prioritising access for marginalised groups, the White Paper aligned skills development with broader social justice objectives (Gibberd & Hankwebe, 2022; Botha et al., 2023).

However, the document faced several limitations. Its objectives were broad, offering limited operational guidance for implementation across diverse sectors with varying capacities (Kumalo, 2021). It did not sufficiently address ongoing professional development needs, despite the evolving nature of public service work (PSC, 2021; Ryklief et al., 2022). Additionally, socio-economic and cultural barriers to accessing training were not adequately considered, particularly in rural or resource-constrained contexts (Pintor & Budiyantri, 2021; Arifin et al., 2023).

These gaps highlight the need for contemporary learnership frameworks that incorporate contextual diversity, equity considerations, and sustained sectoral capacity.

2.10.4 Skills Development Act 97 of 1998

The Skills Development Act 97 of 1998 represents a cornerstone of South Africa's post-apartheid skills development system. Enacted to address historical inequalities and enhance workforce capabilities, the Act aimed to expand access to training, boost productivity, and promote inclusive economic growth (Ngcwangu, 2025). It emerged in response to declining employer-led training and growing recognition of insufficient workplace readiness among young people (Allais & Ngcwangu, 2025).

The Act introduced a structured approach to vocational development, integrating accredited theoretical learning, workplace experience, and participatory skills planning. Its decentralised provisions empower regional structures to respond to localised needs more effectively, an essential feature for addressing skills shortages in rural and marginalised areas (Ngqwala & Ballard, 2020).

A significant contribution of the Act was the establishment of Sector Education and Training Authorities. SETAs play a central role in designing, quality-assuring, and administering learnerships, ensuring that training aligns with labour market requirements and national development priorities (Allais & Ngcwangu, 2025). Within this model, learnerships provide an integrated pathway into employment, particularly for young people and historically excluded groups, supporting national goals for inclusive growth and improved labour market access (Habiyaemye et al., 2022).

This legislative framework provides the foundation for the strategic pillars discussed in subsequent sections of this chapter.

2.10.5 Higher Education Act and Its Implications for Learnership Governance

Although learnerships fall primarily under the Skills Development Act and QCTO oversight, the Higher Education Act shapes the systemic landscape within which vocational qualifications, institutional accountability, and national quality assurance operate (Madambi, 2025). The Act mandates DHET to ensure coherence across higher education, TVET, community colleges, and skills development structures, thereby reinforcing standards for curriculum quality, assessment, and provider accreditation.

Its emphasis on rigorous quality assurance, supported through SAQA and QCTO, strengthens the credibility of vocational qualifications and enables learner mobility across education pathways. This alignment reduces fragmentation in the certification environment and facilitates articulation into further learning or career progression opportunities, including within agricultural occupations (White et al., 2025).

The Act also reinforces collaborative governance by formalising the participation of employers, education providers, and professional bodies in shaping qualifications and standards. This mirrors AgriSETA's partnership model, which integrates industry expertise into curriculum development, occupational profiling, and workplace learning design.

The Act underscores transformation and equity as fundamental imperatives. Its provisions for widening participation and strengthening support for vulnerable groups directly complement the developmental objectives of AgriSETA learnerships, especially in rural contexts and among women and previously marginalised communities (Moganedi & Mkhize, 2023).

2.11 SKILLS DEVELOPMENT IMPLEMENTATION STRATEGIES

The practical implementation of South Africa's skills development legislation relies on national strategies and institutional mechanisms that translate policy into coordinated measurable programmes. Key among these are the National Skills Development Strategy (NSDS), the National Skills Authority (NSA), the National Skills Fund (NSF), and the network of Sector Education and Training Authorities (SETAs). These structures operationalise the post-1994 vision for an equitable, demand-driven skills system by guiding planning, funding, quality assurance, and sectoral coordination (Allais & Ngcwangu, 2025). For the agricultural sector, these mechanisms shape how learnerships are designed, funded, and delivered, as well as how

they respond to rural development priorities and labour market needs.

2.11.1 National Skills Development Strategy

The National Skills Development Strategy (NSDS) functioned as the principal instrument for implementing the Skills Development Act. Introduced from 2001 to 2005, the NSDS aimed to address historical skills deficits by promoting structured, inclusive, and workplace-relevant learning pathways across sectors (Kgalema et al., 2021). It provided an overarching framework for national, sectoral, and employer-based interventions, emphasising workforce competence, equity, and participation among previously marginalised groups (Kgalema et al., 2002).

The NSDS framework was embedded across all spheres of government, consistent with South Africa's cooperative governance model. This ensured that national skills priorities informed provincial and municipal development planning, creating a unified approach to human resource development (HSRC, 2022). In the agricultural sector, the strategy led to the establishment of AgriSETA, which became responsible for coordinating sector-specific learnerships, supporting workplace training, and addressing critical skills shortages in the agricultural industry.

Although the NSDS established clear priorities and institutional structures, its implementation outcomes were mixed. Persistent skills gaps in local government and rural sectors indicate challenges in resource alignment, limited employer participation, and uneven institutional capacity (Akoobhai, 2024). Evaluation reports noted that progress was slower than anticipated, suggesting that translating strategic aims into effective, localised interventions required stronger coordination, improved monitoring, and sustained investment.

These shortcomings provide essential lessons for current and future skills strategies. They highlight the need for more context-responsive planning, better integrating rural development priorities, and strengthening SETA-led partnerships to ensure that learnership opportunities reach underserved communities and emerging agricultural enterprises.

2.11.2 National Skills Authority

The National Skills Authority (NSA), established under Chapter 2 of the Skills Development Act 97 of 1998, provides strategic oversight and advisory input for the national skills system. Its core mandate includes advising the Minister of Higher Education and Training on skills development

policies, monitoring the implementation of national strategies, and guiding the allocation of resources from the National Skills Fund (Allais & Ngcwangu, 2025). Through these responsibilities, the NSA helps to ensure that national priorities are translated into coherent, responsive interventions across all economic sectors.

A key feature of the NSA's role is its responsibility for facilitating inclusive stakeholder participation. The Authority draws representation from organised labour, employer bodies, community organisations, and professional associations, creating a platform for social dialogue and collaborative governance in skills planning (Ngcwangu, 2024). This participatory structure is designed to promote equitable decision-making and ensure that the skills system reflects the needs of both employers and workers.

Despite this mandate, several operational constraints have limited the NSA's impact. Persistent challenges, including slow budget expenditure, administrative bottlenecks, and limited uptake of training opportunities, have weakened its ability to oversee the timely and effective implementation of national skills priorities (Matha & Jahed, 2024). These constraints reduce the responsiveness of the skills system, particularly in sectors that require rapid capacity development, such as agriculture and local government. Strengthening NSA governance, improving monitoring systems, and streamlining administrative processes remain essential for enhancing national coordination.

2.11.3 National Skills Fund

The National Skills Fund (NSF), established under Chapter 7 of the Skills Development Act 97 of 1998, is the primary financing mechanism for national skills priorities. It supports large-scale programmes aligned with the National Skills Development Strategy and funds training initiatives that target unemployed youth, marginalised communities, and sectors with critical skills shortages (O'Neil et al., 2023). The NSF is financed through the Skills Development Levies Act 9 of 1999, which requires employers to contribute 1% of their payroll to SARS, of which 20% is allocated to the NSF and 80% to the respective SETAs.

Employers can access mandatory grants through their SETA by appointing a registered Skills Development Facilitator (SDF). The SDF coordinates workplace skills planning and ensures compliance with reporting requirements, including the submission of a Workplace Skills Plan (WSP) and Annual Training Report (ATR). Once these documents are approved, employers

qualify for levy-based grants to support structured training, upskilling, and workplace learning interventions (Botha et al., 2023). This system is intended to incentivise investment in training and ensure that employer contributions translate into tangible learning opportunities.

Although the NSF plays a critical developmental role, its effectiveness has been hampered by administrative inefficiencies, delayed disbursements, and inconsistent project oversight, which limit its capacity to address urgent national skills needs (NSF, 2023). Improving governance, financial accountability, and monitoring systems would enhance the NSF's contribution to inclusive skills development, particularly for rural and youth-focused programmes such as AgriSETA learnerships.

2.11.4 Sector Education and Training Authorities (SETAs)

Sector Education and Training Authorities (SETAs) form the backbone of South Africa's post-apartheid skills development system. Their establishment under the Skills Development Act 97 of 1998 represented a shift toward a coordinated national approach to workforce development, responding to globalisation, technological change, and longstanding inequalities in training access (Matha, 2024). Unlike pre-1994 industry training boards, SETAs were designed to provide comprehensive sectoral coverage and align training with national development and transformation priorities.

21 SETAs are responsible for developing sector skills plans, facilitating learnerships, accrediting training providers, and administering levy-funded grants. This system ensures that each sector maintains dedicated institutional capacity for skills planning and quality assurance, while supporting the broader goals of transformation, industrialisation, and inclusive growth (W&R SETA, 2021). SETAs also intersect with national strategies, such as the NSDS and the Industrial Policy Action Plan, as well as regional development frameworks, including PGDS and IDPs (Tekwa, 2024).

Despite this robust policy architecture, the performance of SETAs is uneven. A persistent challenge is the limited capacity of many training providers, particularly TVET colleges, which often lack up-to-date equipment, industry-aligned curricula, and sustained employer partnerships (Makole & Moeti, 2023; Njengele et al., 2024). These weaknesses diminish the relevance of training and limit the ability of learnerships to adapt to technological and market changes.

Curriculum misalignment remains a significant systemic constraint. Multiple studies highlight obsolete content, fragmented occupational standards, and insufficient employer involvement in curriculum review processes (Pryimak, 2023). This misalignment contributes to weak labour absorption and undermines the potential for learnerships to address skills shortages.

Governance and leadership weaknesses within institutions that deliver SETA-supported programmes further compound these challenges. Issues such as unclear leadership mandates, inconsistent decision-making, and limited managerial capacity contribute to poor programme implementation and diminished responsiveness (Bester, 2023; Prummer, 2023).

Stakeholder coordination also remains a significant hurdle. Weak integration between government departments, industry bodies, and training institutions often results in duplication, inefficiencies, and training that does not translate into improved workplace performance (Njengele et al., 2024; Molele et al., 2024). These coordination gaps limit the overall impact of the SETA system, despite its strong policy foundation.

SETAs play a crucial role in facilitating learnerships and advancing the national skills development agenda. However, their effectiveness depends on strengthening institutional capacity, improving curriculum responsiveness, and enhancing coordination across all stakeholders. Addressing these gaps is essential for ensuring that SETA-supported learnerships make a meaningful contribution to sectoral skills needs and broader socio-economic development priorities.

2.11.5 Economic Imperatives of Learnerships

Learnerships are strategically positioned within South Africa's economic landscape, given the country's persistent structural unemployment, skills deficits, and slow economic growth. By integrating theoretical learning with practical workplace experience, learnerships contribute directly to human capital formation and improved labour market outcomes (O'Neil et al., 2023). Their role in expanding the skills base is essential for enhancing productivity, accelerating economic participation, and supporting national growth objectives.

Evidence consistently shows that improvements in education and vocational training have a positive causal impact on national economic performance (Odhiambo, 2020). Learnerships support this by producing work-ready graduates equipped with sector-specific competencies,

including those required within small and medium enterprises, which are central to job creation and economic diversification (Amoah et al., 2022).

However, South Africa continues to experience a skills mismatch. Many learnerships still fail to adequately respond to evolving labour market needs, contributing to high unemployment rates, even among graduates (Botha et al., 2023). Strengthening labour market alignment is therefore essential for improving labour absorption and increasing the economic return on training investment.

Learnerships also contribute indirectly to foreign direct investment (FDI). A skilled workforce enhances national competitiveness and investor confidence, and studies demonstrate a clear link between workforce capability and increased FDI inflows (Mhlabane & Nishimwe, 2022; Muzuva et al., 2024). By improving workforce quality, learnerships contribute to broader economic resilience and increased investment attractiveness.

Macroeconomic conditions further shape the context in which learnerships operate. High inflation, inflation uncertainty, and South Africa's elevated debt-to-GDP ratio reduce the fiscal space for training and impede the conditions needed for stable labour markets (Saungweme & Odhiambo, 2020; Mandeya & Ho, 2021). In such an environment, skills development becomes even more critical, as productivity gains generated through practical training can contribute to long-term growth and improved fiscal sustainability.

Learnerships address multiple economic priorities. They support workforce development, enhance labour market participation, strengthen competitiveness, and contribute to macroeconomic stability. Realising these financial benefits, however, requires close alignment between learnership design, industry needs, and broader economic conditions. Ensuring such alignment is central to maximising the economic impact of the learnership system.

2.12 STRATEGIC POLICY, GOVERNANCE AND CHANGE-MANAGEMENT DRIVERS OF LEARNERSHIP EFFECTIVENESS

A constellation of legislative obligations, national development priorities, and sector-specific mandates shapes South Africa's skills development system. National frameworks such as the National Development Plan, the Skills Development Act, and the Post-School Education and Training (PSET) architecture establish the overarching strategic direction for SETAs and Work-

Integrated Learning programmes (Allais & Ngcwangu, 2025). While these frameworks articulate intent, their ability to improve learnership effectiveness depends on how they are interpreted, operationalised, and governed across institutions responsible for implementation.

Learnerships operate at the nexus of policy, institutional capability, and labour market demand. Persistent challenges such as high unemployment, uneven programme quality, limited employer participation, and weak post-training pathways illustrate the gap between policy ambition and operational reality (Mtotywa & Motaung, 2024). Understanding this gap requires evaluating the strategic drivers that either strengthen or undermine programme performance. These drivers also condition AgriSETA's capacity to fulfil its mandate of supporting rural development, addressing sectoral shortages, and contributing to national productivity and transformation objectives (O'Neil et al., 2023).

Effective system reform depends on the readiness for change management. Frameworks such as ADKAR highlight how Awareness, Desire, Knowledge, Ability, and Reinforcement influence the adoption of reforms by institutions, facilitators, employers, and trainees (Balluck et al., 2020). Applying this lens helps explain why particular initiatives succeed, stall, or fail in contexts characterised by capacity constraints, fragmented coordination, and unequal access to resources.

To deepen the conceptual basis for evaluating AgriSETA learnerships, the subsections that follow examine five strategic drivers of effectiveness:

- i. policy coherence and strategic alignment,
- ii. governance and accountability structures,
- iii. digital transformation and system modernisation,
- iv. institutional capability and stakeholder coordination, and
- v. Change-management readiness and adoption dynamics.

These drivers shape programme design, delivery quality, and post-training outcomes. Understanding their influence is essential for assessing the relevance and limitations of agricultural learnerships within South Africa's evolving skills and economic landscape.

2.12.1 Alignment with National and Global Development Agendas

National and global development agendas shape the strategic intent of South Africa's skills system and provide the benchmarks against which the performance of learnerships is evaluated. The Sustainable Development Goals emphasise inclusive economic participation, equitable access to quality education, and employment opportunities that support long-term growth (ETDP SETA, 2021). SDG 4 on quality education, SDG 8 on decent work, and SDG 9 on industry, innovation, and infrastructure are especially relevant to vocational training, creating clear expectations that learnerships should strengthen productivity, employability, and enterprise development.

At the national level, the National Development Plan prioritises skills development as a key mechanism for reducing poverty, enhancing competitiveness, and addressing persistent youth unemployment (Mabaso, Ontong, 2025). The NDP calls for coordinated interventions across government, SETAs, employers, and post-school institutions to ensure that training supply aligns with labour market demand. For the agricultural sector, the NDP emphasises the need for stronger technical capacity, more effective extension services, and the development of small-scale commercial farmers who can contribute to rural economic growth (Mathinya et al., 2025). Within this policy environment, learnerships are expected not only to provide training but to function as pathways that support structural transformation.

Despite this alignment in principle, the contribution of learnerships to national and global agendas remains uneven. Weak employer participation, fragmented post-training support, and inconsistent labour market absorption continue to limit their developmental impact (Chowa et al., 2025). For AgriSETA specifically, constraints related to land access, market integration, and rural infrastructure further restrict the ability of programmes to translate training into sustainable employment or enterprise activity (Mathinya et al., 2022). These systemic misalignments explain why learnerships often succeed in short-term skills delivery but struggle to produce long-lasting economic or societal outcomes.

Assessing alignment with these agendas provides a foundation for evaluating whether AgriSETA's programmes meaningfully support national development priorities or whether structural reforms are needed to strengthen their contribution. This linkage is critical for determining programme relevance and for situating agricultural learnerships within South

Africa's broader development trajectory.

2.12.2 The Higher Education Act, Quality Assurance and Work-Integrated Learning

The Higher Education Act and its associated regulatory instruments shape the quality assurance landscape within which learnerships operate. Although learnerships fall under the occupational qualifications sub-framework, they are delivered within the broader post-school education system, which is governed by the Department of Higher Education and Training and its quality councils (White et al., 2025). These regulatory arrangements influence curriculum standards, provider accreditation, assessment requirements, and mechanisms for monitoring programme quality.

Quality assurance bodies such as the QCTO, CHE, and Umalusi are mandated to ensure that Work-Integrated Learning is coherent, adequately supervised, and aligned with occupational competence standards (DHET, 2021). However, inconsistencies in provider capacity, workplace readiness, and assessment implementation undermine the quality of WIL experiences. Many agricultural employers lack structured mentoring systems, appropriate supervision, or the organisational capability required to support learners effectively (Motala et al., 2021). These discrepancies create variation in workplace exposure, which directly influences learner competence and readiness for employment or enterprise development.

The effectiveness of WIL is also shaped by the articulation of learnerships with other components of the post-school system. Weak alignment between learnerships, TVET programmes, and higher education pathways restricts learner mobility and limits opportunities for advanced skills development (Norodien-Fataar, 2024). Without clear progression routes, many graduates complete programmes without viable opportunities for further study or skills upgrading.

While the Higher Education Act provides a regulatory foundation for improving quality, consistency, and system coherence, its impact is constrained by uneven institutional capacity and limited coordination between SETAs, training providers, and workplaces (Khunoethe & Reddy, 2023). Strengthening these linkages is essential for improving the credibility and developmental value of learnerships, particularly in sectors such as agriculture, where workplace environments vary significantly.

2.12.3 Corporate Governance and Return on Skills Investment

Corporate governance structures determine how effectively levy-funded skills development programmes are planned, implemented, and evaluated. SETAs are mandated to manage public funds responsibly, strengthen employer participation, and ensure that learnerships contribute to national development priorities (ETDP SETA, 2024). Sound governance is therefore essential for ensuring that investments in training translate into meaningful labour market and economic outcomes.

Concerns regarding accountability, financial management, and programme oversight have been raised across several SETAs. These include challenges linked to board instability, weak monitoring systems, and inefficiencies in the allocation and utilisation of levy resources (Pongweni, 2025). Governance weaknesses erode trust among employers and diminish the system's capacity to deliver targeted, high-quality training. This is particularly important in agriculture, where the development of practical skills depends on strong partnerships between industry, municipalities, and rural development actors (Khunoethe & Reddy, 2023).

The question of return on skills investment has gained prominence as significant public funds continue to be allocated to training without commensurate reductions in youth unemployment or informal sector dependency (Mustajab & Irawan, 2023). Assessing ROI requires more than measuring training costs and employment rates. It involves evaluating whether learnerships build relevant competencies, support enterprise development, and contribute to structural transformation within local economies. In agriculture, ROI is influenced by access to land, markets, finance, and extension services, which determine whether trainees can convert acquired skills into productive activity (McGrath et al., 2020).

Stronger governance mechanisms can enhance ROI by improving alignment between programme content and labour market needs, strengthening provider performance, and encouraging more meaningful employer participation. Without such reforms, learnerships risk functioning as compliance-driven initiatives rather than developmental instruments that can improve economic participation. Understanding how governance influences ROI is therefore central to evaluating the overall effectiveness of AgriSETA-funded programmes.

2.12.4 Digitalisation, Blended Learning and Online Delivery in Vocational Training

Digitalisation has become a defining feature of modern skills development systems, transforming how learning is delivered, assessed, and supported. Global trends indicate an expansion in blended and online modalities that enhance flexibility, widen access, and strengthen the relevance of vocational training in dynamic labour markets (Song & Lai, 2025). These shifts have significant implications for the design and implementation of learnerships in South Africa.

Within the occupational qualifications framework, digital tools can complement theoretical components, enhance formative assessment, and improve communication between learners, providers, and workplaces (Attwell et al., 2023). Blended learning models reduce travel costs, expand access to multimedia simulations, and promote more consistent learning experiences across resource-constrained contexts. For agricultural programmes, digital platforms additionally support practical learning through virtual demonstrations, management applications, and remote advisory tools (Song & Lai, 2025).

However, digitalisation risks reproducing existing inequalities. Many rural and small-scale employers lack reliable connectivity, suitable devices, or the necessary technical expertise to integrate digital tools into workplace learning effectively (Mwansa et al., 2025). Learners in these environments often face similar barriers, which constrain their engagement with online materials and limit the benefits of blended learning. These digital divides weaken programme quality and exacerbate geographic disparities.

Institutional readiness poses an additional constraint. Many providers lack the digital infrastructure, instructional design capacity, and staff expertise required to deliver technology-enhanced learning at scale (Rajuroy, 2025). Without adequate support and professional development, digitalisation may lead to superficial adoption rather than meaningful pedagogical change. As a result, learner experiences often vary widely across providers and regions.

Effective digitalisation requires coordinated investment, targeted institutional support, and governance mechanisms that ensure equitable access. For AgriSETA, building digital capability across providers and workplaces is essential for improving programme quality and preparing learners for a modern, technology-enabled agricultural sector. Integrating digitalisation within broader system reforms creates the foundation for more flexible, adaptive, and future-oriented learnership delivery.

2.12.5 Change Management and the ADKAR Model in Skills System Reform

The effectiveness of skills development depends not only on policy design and institutional mandates but also on the ability of organisations and stakeholders to implement change. Persistent weaknesses in coordination, programme quality, and post-training support suggest that reforms within the skills ecosystem often fail to translate from policy intention into operational practice (Khunoethe & Reddy, 2023). Applying a change-management lens helps explain why this occurs.

The ADKAR model provides a structured framework for analysing the conditions necessary for successful system reform. Awareness of the need for change is uneven across the skills landscape. Although national strategies emphasise modernising vocational training, stakeholders such as employers, training providers, and local institutions may not share a common understanding of the rationale for reforms or their practical implications (Hanif, 2023). Fragmented awareness weakens early momentum for system-wide improvement.

Incentives, organisational culture, and perceived benefits shape the desire to support reform. Employers in agriculture may be hesitant to participate in structured workplace training if administrative requirements are high or if the expected returns are uncertain (O’Neil et al., 2023). Training providers, particularly those with limited resources, may prioritise compliance over innovation when incentives for quality enhancement are weak.

Knowledge and ability relate to whether institutions possess the technical, managerial, and pedagogical skills required to implement reforms. Many providers face capacity constraints in curriculum design, digital learning, learner support, and assessment moderation. Workplaces frequently lack structured mentoring systems, which compromises the quality of Work-Integrated Learning (Hlatjwako et al., 2025). These capability gaps erode the impact of reforms regardless of policy intent.

Reinforcement mechanisms are necessary to sustain improvements. Weak monitoring systems, inconsistent accountability structures, and limited feedback loops between SETAs, providers, and employers restrict the consolidation of change across the system (Sithole, 2025). Without reinforcement, promising initiatives lose traction and reforms remain fragmented.

Applying the ADKAR model clarifies why policies aligned with national development agendas, governance principles, and digitalisation strategies do not consistently achieve their intended

outcomes. It highlights the need for coordinated capacity building, clearer incentives, and stronger oversight to ensure that reforms become embedded in everyday practice. For AgriSETA, integrating change-management principles into programme planning and implementation is essential for improving the long-term effectiveness of learnerships.

2.13 MACRO CONTEXT

The macro context considers the global forces that shape the design, expectations, and performance of contemporary learnership programmes. Internationally, vocational training systems have undergone significant transformation in response to rapid technological change, shifting labour market demands, and evolving pedagogical models that emphasise flexibility, digital competence, and applied learning (Rajamanickam et al., 2025). These developments influence how countries conceptualise skills development and the competencies required for participation in increasingly complex economic environments.

Global learnership and apprenticeship models have also informed local vocational practices in South Africa. International frameworks emphasising work-integrated learning, competency-based assessment, and stronger employer engagement have contributed to national policy reforms and helped shape the evolution of the skills development landscape (ILO, 2022). In contrast, these models offer valuable benchmarks; their translation into meaningful outcomes depends on the capacity of local institutions, the coherence of implementation systems, and the realities of domestic labour markets.

Sustainability challenges within vocational training are another global concern. International evidence shows that training systems frequently experience funding pressures, inconsistencies in programme quality, and limited post-training support, all of which undermine long-term outcomes (Han & Jamaludin, 2025). These challenges are mirrored within South Africa's skills development architecture and highlight the need for policy alignment, adequate resourcing, and effective institutional coordination to maintain programme relevance.

The alignment between learnerships and global development priorities, particularly the United Nations Sustainable Development Goal 4, is also significant. SDG 4 emphasises inclusive and equitable quality education, lifelong learning, and skills development for employment and sustainable livelihoods (Barbosa et al., 2020). Positioning AgriSETA learnerships within this global agenda strengthens understanding of their role in advancing broader human capital

development and socio-economic transformation.

The macro context encompasses the economic and social implications of vocational training. International research suggests that well-designed learnerships can contribute to reduced unemployment, enhanced productivity, and improved community resilience. However, outcomes often remain uneven due to structural constraints within labour markets and training ecosystems (Kemper et al., 2025). These global insights provide a foundation for analysing the relevance, opportunities, and limitations of learnerships within South Africa's agricultural sector.

2.13.1 Emerging Trends in Global Vocational Training

The global vocational education and training sector is undergoing rapid transformation in response to technological innovation, labour market volatility, and the demand for adaptable, future-oriented skills. As economies digitalise, vocational systems are increasingly adopting flexible, technology-enhanced learning models that integrate workplace readiness, practical competence, and innovation capabilities (Ghosh & Ravichandran, 2024). These developments provide important reference points for countries seeking to modernise their training systems and equip learners for competitive and dynamic labour markets.

2.13.1.1 Work-Integrated Learning in Global Vocational Systems

Work-Integrated Learning (WIL) has become a central feature of contemporary vocational systems. Global training models are increasingly combining structured theoretical instruction with supervised workplace learning to enhance relevance and ensure alignment with industry expectations (Cahyasari Putra et al., 2022). WIL approaches help close the persistent gap between classroom learning and the competencies needed for workplace environments.

In agricultural training, WIL is especially important because competence is demonstrated through practical ability, situational judgement, and regular exposure to production systems. International evidence highlights that effective WIL models depend on strong partnerships between training providers, employers, and regulatory bodies. These partnerships support the development of shared curricula, coordinated workplace activities, and consistent standards that reflect industry needs (Permani et al., 2025).

Countries with well-established WIL systems report improvements in learner employability,

work readiness, and productivity. These benefits arise because trainees complete programmes with both technical knowledge and contextual understanding of operational settings (Philip et al., 2025),

Agriculture, however, presents unique challenges for WIL. Many rural regions lack appropriate host sites, experienced mentors, or adequate infrastructure to support workplace learning. This results in uneven learner experiences and inconsistent quality of WIL implementation (Khetsha & Makhoahle, 2023).

In South Africa, WIL forms the foundation of learnerships as mandated by the Skills Development Act and the Quality Council for Trades and Occupations (QCTO). AgriSETA learnerships reflect this policy direction, although disparities in host-site capacity, supervision, and workplace exposure continue to undermine implementation (ILO, 2022). These weaknesses contribute to uneven learner outcomes, particularly in remote areas where agricultural enterprises face resource constraints.

Strengthening WIL within AgriSETA programmes requires closer alignment between curriculum intent, workplace tasks, and assessment instruments. Clearer expectations for employers, stronger monitoring processes, and shared accountability between institutions and host sites would improve standardisation and learner progression (Wahyuningsih et al., 2025). A more robust WIL structure would support the National Development Plan's emphasis on labour-absorbing growth by increasing workplace readiness and entrepreneurial capability in agricultural settings.

2.13.1.2 Technological Innovations Transforming Vocational Education

Advancements in digital and immersive technologies are reshaping vocational training by transforming how learners acquire and practise skills. Virtual Reality (VR) and Augmented Reality (AR) support simulation-based learning for high-risk or technically demanding tasks, allowing trainees to practise safely and consistently in controlled environments (Muskhir et al., 2024). AR tools overlay instructional guidance onto real tasks, enhancing accuracy and reinforcing procedural understanding.

Artificial Intelligence (AI) and Machine Learning (ML) enable personalised learning by adapting instructional content to individual performance. These tools support automated feedback, real-time assessment, and the identification of learning gaps (Raza, 2023). Predictive analytics can

track learner progress and strengthen early intervention strategies.

The Internet of Things (IoT) further brings training environments closer to real-world industry conditions. IoT-enabled tools and sensors generate live operational data, allowing trainees to engage with diagnostics, monitoring systems, and performance indicators used in modern workplaces (Ghashim & Arshad, 2022).

Gamified learning environments have also become more prevalent. These systems utilise game-based elements to enhance motivation, reinforce soft skills, and enhance practical competence (Dahalan et al., 2023). Robotics and automation laboratories provide additional opportunities for hands-on learning and innovation, preparing learners for industries where automation is increasingly integrated into production systems (Setyawan, 2025).

These technologies expand the possibilities for experiential learning and enhance the alignment between vocational training and the rapidly evolving industry demands.

2.13.1.3 Case Studies of Global Best Practice

International case studies demonstrate the value of technology-enhanced vocational training.

- In Australia, VR simulations are used to support trades training, enabling trainees in fields such as carpentry and plumbing to practise repeatedly and safely, with reduced material waste and improved skill retention (Construction Skills Queensland & Queensland University of Technology, 2022)
- Canada has integrated AR systems in welding programmes, offering real-time performance feedback and decreasing reliance on physical consumables (Hussain et al., 2025).
- Singapore's vocational institutions use AI-supported adaptive learning platforms to personalise training pathways, accommodate diverse learner profiles, and strengthen engagement and achievement (Tan et al., 2025).

These examples demonstrate how technology-supported vocational models can enhance safety, lower training costs, enhance competence, and facilitate scalable delivery.

2.13.1.4 Challenges and Limitations

Despite their potential, technology-integrated vocational systems face several constraints. High implementation and maintenance costs remain a significant barrier, particularly for institutions operating with limited budgets (OECD, 2025). Infrastructure challenges, including unreliable connectivity, restrict adoption in rural or under-resourced areas.

Effective use of advanced technologies also requires sustained educator training. Many institutions struggle to equip educators with the digital competence necessary to integrate these tools meaningfully into their teaching practices (Selase et al., 2023). Concerns about digital exclusion persist, with learners in remote areas being more likely to face access barriers to digital resources.

These limitations highlight that technology must complement, rather than replace, broader structural and institutional reforms. Without sufficient support, technology integration can deepen inequalities rather than resolve them.

2.13.1.5 Implications for Policy and Practice

Maximising the value of emerging technologies in vocational training requires coordinated policy direction, targeted investment, and ongoing institutional capacity-building. International policy frameworks emphasise the need to embed digital competence within curricula, strengthen public-private partnerships, and promote inclusive access to technology-enhanced learning opportunities (ETF, 2023).

Key implications for policy and practice include the need to:

- strengthen educator training to ensure confident and effective use of advanced technologies
- adopt inclusive digital strategies that minimise learner access gaps
- build partnerships with industry to support sustainable technology adoption
- integrate digital and innovation competencies systematically into vocational curricula

These implications are particularly relevant to the agricultural sector, where technology is increasingly central to production, market access, and data-driven decision-making. Technologies such as VR, AR, AI, IoT, and automation offer valuable opportunities for enhancing agricultural training. However, their success depends on having the appropriate resources, skilled personnel, and equitable access for all learners (Pulley et al., 2025).

2.13.2 Impact of International Learnership Models on Local Practices

International learnership models continue to shape how countries design and reform vocational training systems. These models serve as benchmarks for curriculum development, industry engagement, technology utilisation, and the establishment of clear pathways into employment (James Relly & Laczik, 2021). For South Africa, and particularly for agricultural training under AgriSETA, global practices offer reference points for improving programme relevance, standardisation, and labour market alignment. At the same time, the adaptation of such models must account for the realities of rural, unequal, and resource-constrained contexts where implementation challenges are more pronounced.

2.13.2.1 Lessons from Global Learnership Models

Global vocational systems demonstrate the value of combining theoretical learning with structured workplace exposure, as exemplified by models such as the dual systems employed in Germany and Switzerland. These systems integrate classroom instruction with industry-based learning to ensure that trainees apply theoretical concepts in real operational settings, improving workplace readiness and practical competence (OECD, 2025). Elements of this approach are incorporated into South Africa's learnership system, although alignment between coursework and workplace experience remains uneven.

International models also emphasise sector-driven curriculum design. In contexts such as Australia, strong collaboration between training institutions and industry bodies ensures that curricula remain responsive to technological change and shifting labour needs (Taofeek, 2025). South African institutions that offer agricultural training, including specialised colleges, draw inspiration from such approaches, although resource constraints often limit the frequency and depth of curriculum updates.

Technological integration is another defining feature of global best practice. In several countries,

immersive tools such as Virtual Reality (VR) and Augmented Reality (AR) have been introduced to supplement practical instruction, reduce material waste, and improve learner competence in technical tasks (Iyer et al., 2025). These developments demonstrate how well-chosen technologies can effectively support practical learning in situations where physical resources are limited.

2.13.2.2 Local Implementation and Challenges

Translating international learnership models into South Africa's agricultural training system requires careful consideration of contextual realities. Rural colleges and training centres operate under conditions markedly different from those seen in well-resourced international systems. Local farming practices, infrastructure variability, and regional disparities significantly influence both the feasibility and quality of workplace learning (Khunoethe & Reddy, 2023).

A recurring challenge is the misalignment between training outcomes and labour market opportunities. Many learnership graduates struggle to access employment due to limited workplace exposure, weak employer networks, or slow agricultural absorption rates (Government Technical Advisory Centre & DHET, 2020). Addressing this requires more substantial curriculum-industry alignment and more intentional coordination between training providers, employers, and sector bodies.

Sustainability concerns further affect programme effectiveness. Short funding cycles, limited institutional capacity, and minimal post-training support reduce the long-term value of many learnerships. International experience highlights the importance of structured mentorship systems, coherent funding arrangements, and stable policy commitments in sustaining programme quality and supporting learner progression (Ye et al., 2024).

2.13.2.3 Opportunities for South Africa

South Africa can strengthen its learnership ecosystem by selectively adapting relevant global practices while grounding implementation in local conditions. International models underscore the importance of strong public-private partnerships, which can expand training opportunities, enhance access to resources, and create clearer transition pathways into employment (Lawal & Isah, 2025). Strengthening such partnerships within AgriSETA could help address gaps in workplace exposure and industry engagement.

Technology integration presents another opportunity. Digital tools, including AI-supported learning platforms, remote assessment systems, and IoT-enabled monitoring tools, have enhanced the efficiency and quality of vocational programmes in other countries (Leong, 2025). With careful planning and equitable access, these tools could enhance learner readiness and improve instructional quality within agricultural programmes.

Policy alignment also remains critical. International frameworks that prioritise digital transformation, inclusivity, and sustainable funding models offer helpful guidance for refining national strategies. Adapting these lessons meaningfully requires striking a balance between global innovation and local needs, ensuring that vocational education contributes effectively to reducing skill shortages, enhancing employment prospects, and supporting agricultural development in South Africa.

2.13.3 Sustainability Challenges in Vocational Training Programmes

The sustainability of vocational training programmes is essential for building resilient skills systems capable of responding to global socio-economic and environmental pressures. However, many programmes face persistent constraints that undermine their long-term effectiveness, especially in resource-limited environments. These challenges must be considered in relation to both international experience and local contextual realities.

A central constraint is inconsistent and insufficient funding. Many vocational training programmes rely heavily on government allocations that are often strained by competing national priorities. Limited fiscal resources restrict investment in infrastructure, advanced technologies, and continuous development for instructors (Mack, 2024). In contrast, countries with established dual training systems, such as Germany, demonstrate how coordinated public-private partnerships can ease financial burdens and support more sustainable investment models (OECD, 2025).

Keeping curricula aligned with rapidly changing labour market demands presents an additional challenge. Emerging industries increasingly require digital, technical, and innovation-oriented competencies, yet many programmes continue to offer outdated or narrowly framed curricula. International systems that employ continuous industry feedback loops, such as those in Singapore, illustrate the value of responsive curriculum renewal in reducing skills mismatches (OECD, 2025).

Technology integration creates further pressure on under-resourced training environments. While tools such as Artificial Intelligence, Virtual Reality, and the Internet of Things have the potential to strengthen practical learning, their adoption is often limited by infrastructure deficits, affordability constraints, and uneven digital literacy among educators (Rahmawati et al., 2025). Localised, cost-effective solutions, including mobile learning platforms and simplified digital simulations, can help bridge these gaps.

Inclusivity remains a global concern. Despite commitments to equitable access, structural barriers continue to limit the participation of marginalised groups, including women, rural youth, and low-income communities. Although Sustainable Development Goal 4 emphasises inclusive and equitable quality education, implementation remains uneven across regions (Alla-Mensah et al., 2021).

The transition towards greener economies adds further complexity. Vocational training systems are increasingly expected to prepare learners for roles in renewable energy, sustainable agriculture, and waste management. Integrating green skills requires curriculum reform, investment in specialised equipment, and capacity-building for facilitators. International frameworks acknowledge the importance of sustainability within TVET, but also highlight that such reforms are resource-intensive and require long-term political commitment (Jerald et al., 2024)

Governance weaknesses also undermine sustainability. Fragmented policy implementation, inconsistent coordination between national and regional bodies, and weak oversight mechanisms contribute to irregular programme quality and limited strategic coherence (Abd Rahman et al., 2025). Attempts in several countries to strengthen TVET through competency-based education demonstrate both the potential benefits and the persistent governance obstacles that can impede reform.

Ultimately, the lack of robust monitoring and evaluation systems hinders the ability to track outcomes, identify areas for improvement, and inform ongoing enhancements. International systems with mature evaluation practices illustrate the value of structured monitoring tools and feedback mechanisms in enhancing accountability and sustaining programme relevance (Hippach-Schneider, 2025).

These sustainability challenges highlight the need for coherent funding models, effective

governance, relevant curricula, and inclusive, technology-enabled strategies to ensure that vocational training systems remain responsive to evolving economic and social conditions.

2.13.4 Alignment with Sustainable Development Goals

The Sustainable Development Goals provide a global framework for guiding education, employment, and development priorities. Although SDG 4 is the most directly relevant to vocational education, several SDGs intersect with agricultural learnerships, broadening their contribution to inclusive and sustainable development (Storonyanska et al., 2024).

- **SDG 4: Quality Education**

Learnerships directly support SDG 4, which emphasises inclusive, equitable, and high-quality education. Their dual structure, combining theoretical instruction with structured workplace learning, aligns with the SDG 4 targets on lifelong learning, employability, and relevant skills for decent work (Peter et al., 2025). By linking curriculum content to industry requirements, learnerships enhance educational relevance and strengthen pathways into productive economic participation.

- **SDG 1 and SDG 2: No Poverty and Zero Hunger**

Agricultural learnerships contribute to poverty reduction and food security by equipping trainees with technical production skills and sustainable farming practices. These capabilities are particularly significant in resource-constrained rural settings, where enhanced agricultural competence can improve household resilience and support diversified livelihoods (Amankwah & Gwatidzo, 2024).

- **SDG 8: Decent Work and Economic Growth**

Learnerships advance SDG 8 by supporting structured skills acquisition, workplace exposure, and improved labour market readiness. Their focus on preparing youth and marginalised groups for economic participation aligns with national efforts to expand wage employment and stimulate entrepreneurship. However, structural barriers, limited market access, and weak post-training support often restrict the full realisation of SDG 8's intended benefits (McGrath & Yamada, 2023).

- **SDG 9: Industry, Innovation and Infrastructure**

SDG 9 highlights the importance of innovation, technology, and resilient infrastructure. Embedding digital tools, innovation-oriented activities, and climate-smart practices within agricultural training positions AgriSETA learnerships within broader global productivity trends. Such integration supports modernisation and strengthens long-term competitiveness within agricultural value chains (Muwaniki et al., 2024).

- **SDG 13: Climate Action**

Climate action is increasingly central to agricultural training. Learnerships that incorporate soil conservation, water management, and sustainable production techniques contribute to climate resilience and promote environmentally responsible farming practices. This aligns with SDG 13's emphasis on adaptation and sustainable ecosystem management (Bhatnagar et al., 2024).

These SDGs demonstrate that learnerships function not only as education and training mechanisms but also as catalysts for inclusive rural development, sustainable production, and expanded economic participation. Their contribution extends beyond skills acquisition to address broader developmental priorities related to poverty, employment, innovation, and climate resilience.

The figure below summarises how key AgriSETA learnership outcomes intersect with selected SDGs.

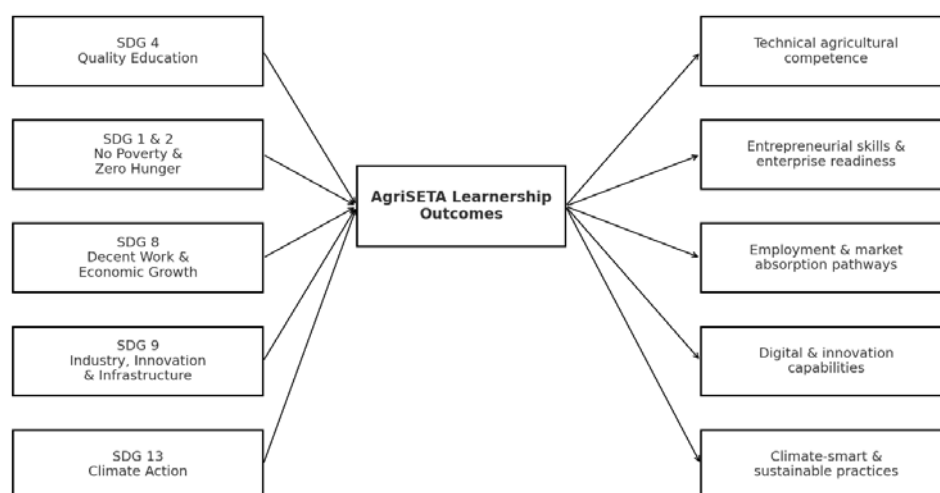


Figure 2: Alignment of AgriSETA Learnership Outcomes with Relevant SDGs

2.13.5 Economic Impact of Learnerships

Learnerships form a central component of South Africa's skills development strategy, making a meaningful contribution to economic growth by addressing unemployment, enhancing productivity, and supporting inclusive economic transformation. Their primary economic value lies in bridging the persistent gap between education and employment by equipping participants with competencies that reflect contemporary labour market needs (Chowa et al., 2025). In a context where youth unemployment remains exceptionally high, learnerships offer structured pathways into employment and help mitigate skills mismatches, particularly for historically disadvantaged groups (Habiyaremye et al., 2022).

By combining accredited qualifications with practical workplace exposure, learnerships enhance employability and support the development of a more adaptable workforce. This aligns with global priorities that emphasise productivity-driven and inclusive economic growth, particularly within the Sustainable Development Goal framework (Rogan et al., 2020). In addition, by addressing sector-specific skills shortages and supporting innovation, learnerships strengthen national competitiveness and contribute to regional economic development.

Private sector participation is reinforced through mechanisms such as the skills development levy, tax incentives, and corporate social investment commitments. These instruments encourage firms to invest in training, creating mutual benefits: businesses develop a pipeline of entry-level talent, while trainees gain industry-relevant experience and improved employment prospects (O'Neil et al., 2023). This reciprocal relationship supports a cycle of investment, productivity, and socio-economic advancement.

However, the long-term economic contribution of learnerships depends on effective governance, coherent policy alignment, and robust monitoring systems. Alignment with frameworks such as the National Development Plan helps ensure that training programmes remain responsive to national economic priorities. Collaboration between employers, SETAs, municipalities, and training institutions are also essential for adapting learnerships to evolving labour market trends and technological change.

Persistent challenges, including administrative inefficiencies, uneven programme quality, and limited access in rural areas, continue to restrict the full economic potential of learnerships. Addressing these constraints requires strengthening programme delivery systems, widening

access, and expanding post-training support. Digital learning platforms and blended training models provide opportunities to expand reach, enhance efficiency, and facilitate broader participation (ILO, 2023). With coherent policy support and improved implementation, learnerships can continue to play a strategic role in South Africa's economic development.

2.13.5.1 Corporate Governance, Public Investment, and Return on Skills Development

Public investment in skills development is tied to expectations of economic returns, system accountability, and a measurable impact on the labour market. Learnerships form a substantial component of government expenditure aimed at reducing unemployment, improving productive capacity, and supporting inclusive growth. As a result, the governance of these programmes and their ability to generate tangible returns have become central concerns in national policy debates (O'Neil et al., 2023).

Corporate governance principles emphasise transparency, accountability, and effective use of public resources. These principles are particularly relevant for SETAs, which manage levy funds and are expected to translate financial investment into improved workforce capability. Effective governance requires precise alignment between strategic planning, implementation processes, and long-term development objectives articulated in the National Development Plan (Van Kradenburg, 2025). Weaknesses in governance, planning, or oversight reduce the value generated from public expenditure and erode confidence in the skills development system.

Evaluating return on investment (ROI) is essential for assessing learnership effectiveness. The state's financial commitment to the SETA system rests on the expectation that training participation will increase employability, stimulate enterprise development, and enhance productivity. However, outcomes remain inconsistent across sectors, and many graduates struggle to transition into sustainable work or entrepreneurship (Strydom & Masitenyane, 2025). These challenges weaken overall ROI and highlight systemic issues such as limited market access, inadequate post-training support, and fragmented institutional coordination.

In the agricultural sector, ROI is shaped by additional contextual factors. High input costs, limited access to land, and fragmented value chains constrain the ability of trainees to convert skills into economic activity. As a result, the benefits of agricultural learnerships may materialise more slowly than in other sectors, requiring sustained support mechanisms to enable meaningful

outcomes (Rabie & Cornelissen, 2023). Governance frameworks must therefore account for the structural realities of agriculture when evaluating economic returns.

The effectiveness of public investment also depends on robust monitoring and evaluation. Strong M&E systems enable SETAs and training institutions to track learner progression, identify implementation bottlenecks, and adjust interventions to improve programme quality. However, M&E practices are uneven across providers, and many rural institutions lack the capacity to collect reliable longitudinal data (Ward & Rosenberg, 2020). Strengthening these systems would improve accountability and provide more unmistakable evidence of ROI.

Improved governance also requires stronger coordination across government departments, local municipalities, industry associations, and training institutions. Fragmented responsibilities weaken the alignment between training provision and employment or enterprise opportunities. More integrated inter-agency collaboration would improve the conversion of skills into economic activity, thereby increasing both programme impact and the economic efficiency of public investment (Zweni, 2023).

Incorporating corporate governance and ROI considerations into the analysis of learnerships underscores the need to view training not only as a social intervention but also as a strategic economic investment. Strengthening governance structures, improving resource allocation, and expanding post-training support can significantly increase the returns generated from learnerships, particularly in sectors characterised by structural barriers and high entry costs. These insights reinforce the broader argument of this thesis: learnerships achieve their highest developmental value when embedded within coordinated, well-governed, and opportunity-rich systems.

2.13.6 Social Impact of Learnerships

Learnerships hold significant social value in South Africa by advancing inclusion, promoting equity, and reducing structural barriers to education and employment. These programmes expand access to formal training for marginalised groups, including youth, women, and persons with disabilities, and in doing so support international goals aimed at reducing inequality (W&RSETA, 2023). By providing recognised qualifications and practical experience, learnerships strengthen social mobility and enable participants to transition from unemployment and poverty into more stable forms of economic participation.

The benefits extend beyond individual learners to households and communities. Increased access to training and employment enhances household income, reduces dependency on social protection systems, and improves long-term financial security. Evidence indicates that participation in structured training programmes can improve living standards, reduce vulnerability, and strengthen resilience in communities facing persistent socio-economic challenges (O’Neil et al., 2023). These outcomes contribute to broader efforts aimed at eradicating poverty and promoting sustainable livelihoods.

Learnerships also promote lifelong learning by encouraging continued skills development and progression through the education and training system. This orientation enhances adaptability, strengthens employability, and supports career advancement in dynamic labour markets. Exposure to workplace environments reinforces soft skills such as teamwork, communication, and professionalism, contributing to the development of a confident and work-ready labour force that aligns with global commitments to quality education (Orji, 2025).

At the community level, learnerships help build social cohesion by fostering collaboration between employers, training institutions, and local organisations. These partnerships strengthen local capacity and create more coordinated responses to socio-economic challenges. Programmes that intentionally support the participation of women contribute to gender equality by expanding access to training and formal employment opportunities (O’Neil et al., 2023)

Learnerships further enhance social capital by broadening learners’ access to professional networks, role models, and mentorship. These connections support career progression, increase employability, and help disrupt intergenerational cycles of unemployment. As more participants enter formal employment or entrepreneurial pathways, they contribute to tax revenues, participate in social security systems, and stimulate community-level economic activity.

Learnerships exert a substantial social impact. They facilitate empowerment, strengthen household resilience, promote inclusive participation in the economy, and support more equitable socio-economic development. Their contribution to social advancement underscores the importance of sustaining and expanding these programmes within South Africa’s skills development framework.

2.13.7 Environmental Impact of Learnerships

Learnerships are increasingly contributing to environmental sustainability by equipping participants with the knowledge and practical skills necessary to address challenges such as climate change, resource depletion, and environmental degradation. Many programmes integrate green skills into vocational curricula and align with Sustainable Development Goals related to climate action, responsible consumption, and sustainable production (McGrath & Russon, 2023). By promoting environmentally responsible practices, learnerships support national transitions toward greener economies and contribute to broader sustainability objectives.

2.13.7.1 Promoting Green Industries and Practices

A growing number of learnerships focus on emerging green sectors, including renewable energy, sustainable agriculture, waste management, and resource-efficient manufacturing. These programmes equip trainees to implement energy-efficient technologies, manage waste more effectively, and adopt sustainable farming methods (McGrath & Russon, 2023). Such training reduces environmental footprints while preparing learners for employment opportunities within expanding green industries.

2.13.7.2 Facilitating a Low-Carbon Transition

By embedding sustainability principles within their curricula, learnerships strengthen the competencies needed to support national and global low-carbon development pathways. Training in areas such as water conservation, green construction, and renewable energy installation prepares learners to contribute to climate mitigation and adaptation initiatives (EWSETA, 2025). These programmes reinforce the application of sustainable practices in both workplace and household contexts, thereby enhancing societal resilience to environmental challenges.

2.13.7.3 Collaboration for Environmental Sustainability

Environmental sustainability within learnership systems is often supported through partnerships between government, industry, training institutions, and civil society. Such collaboration enables the design of programmes that respond to environmental pressures while creating employment within green sectors. Coordinated initiatives demonstrate how cross-sectoral cooperation can enhance national capacity for sustainability-focused training and foster a culture of environmental

stewardship (UNIDO, 2025).

2.13.7.4 Systemic Changes and Community Benefits

The environmental impact of learnerships extends beyond formal training settings. Programmes that address biodiversity conservation, soil rehabilitation, and waste-to-energy processes promote sustainable practices within local communities. By equipping participants with practical environmental skills and encouraging local leadership, learnerships contribute to the protection of natural resources and support the development of climate-resilient communities (AgriSETA, 2021).

2.13.8 Policy and Governance Framework for Learnerships

The effectiveness of learnerships in supporting sustainable development depends heavily on the strength of the policy and governance frameworks that underpin their implementation. Well-designed frameworks ensure that learnerships align with national development priorities and global commitments, including the Sustainable Development Goals (SDGs). They provide strategic direction, oversight, and accountability, helping to ensure that learnerships make meaningful contributions to socio-economic transformation (Raj & Jain, 2025).

2.13.8.1 The Role of Policy in Learnership Programmes

Policy frameworks establish the foundational objectives, funding mechanisms, and operational standards of learnership programmes. They determine programme structure, quality assurance protocols, and compliance expectations, ensuring alignment with national socio-economic goals. In South Africa, the National Skills Development Strategy (NSDS) remains central to learnership policy, emphasising priorities such as reducing unemployment, promoting inclusivity, and strengthening multi-sectoral partnerships (O’Neil et al., 2023). Clear policy guidance, particularly regarding funding, often supported through skills development levies, supports the sustainability and scalability of learnership initiatives.

2.13.8.2 Governance Frameworks: Ensuring Effective Implementation

Effective governance is essential for translating policy into meaningful outcomes. Governance structures promote accountability, transparency, and quality assurance, while facilitating cooperation among government entities, industry partners, and educational institutions. Strong

governance is essential in ensuring that learnerships remain responsive to local labour market needs, as noted by OECD (2023).

Robust governance mechanisms are crucial for supporting sustainable rural development, particularly in areas where skills gaps are entrenched. South Africa's decentralised governance model allows regional adaptation, improving programme relevance in diverse socio-economic contexts.

2.13.8.3 Integrating Learnerships into Legislative and Regulatory Frameworks

Embedding learnerships within national legislative and regulatory systems enhances their legitimacy, sustainability, and long-term impact. Legislation establishes formal standards for certification, quality assurance, and employer obligations, ensuring that training meets both the needs of learners and economic priorities. Labour regulations also safeguard participant welfare by regulating wages, working conditions, and support services throughout the training period.

Learnerships, therefore, represent a strategic mechanism for advancing sustainable development through strengthened education, employment, and social equity outcomes. Their alignment with the SDGs reinforces their potential to contribute to economic growth, social transformation, and environmental stewardship.

The macro-level analysis highlights that national and regional skills development policies increasingly position vocational training programmes as instruments for promoting entrepreneurship and inclusive economic participation. However, persistent structural challenges, including rural economic marginalisation, limited access to markets, and unequal distribution of productive resources, continue to influence the capacity of training initiatives to generate sustainable entrepreneurial outcomes. These macro-economic and policy dynamics provide an important contextual foundation for the present study, which seeks to evaluate the effectiveness of learnership programmes in facilitating entrepreneurial growth within constrained development environments.

2.14 MESO CONTEXT

The meso context examines the institutional, legislative, and organisational mechanisms that translate national development priorities into functional learnership programmes. This level

focuses on how national strategies interact with AgriSETA, how regional disparities shape implementation, and how regulatory instruments influence the structure and delivery of vocational training in South Africa. It also considers the roles of key stakeholders involved in coordinating, delivering, and monitoring learnerships. Through this analysis, the meso context highlights the operational factors that shape programme quality, relevance, and sustainability.

Legislative and regulatory frameworks play a central role in guiding the operationalisation of learnerships. Situated between macro-level policy intentions and micro-level delivery structures, these frameworks convert national socio-economic priorities into practical training interventions (Tekwa, 2024). They establish standards for programme design, workplace learning, assessment, and monitoring, ensuring alignment with labour market needs and compliance with national and regional requirements.

Within a sustainable development paradigm, meso-level frameworks also support the integration of learnerships with the Sustainable Development Goals. Regulatory guidance, precise accountability mechanisms, and coordinated governance enable government departments, industry partners, and training institutions to collaborate on shared development objectives (Xueying, 2024). This collaboration is essential for addressing persistent challenges, such as skills shortages, unemployment, and social inequality, particularly in rural contexts where AgriSETA programmes play a crucial role in strategic development.

Understanding these meso-level structures is therefore critical for evaluating the effectiveness of learnerships and identifying opportunities to strengthen institutional coordination, enhance programme delivery, and improve long-term impact.

2.14.1 Intersections Between National Development Plans and AgriSETA

The alignment between national development strategies and sector-specific interventions such as AgriSETA creates an important intersection between high-level policy directives and meso-level implementation systems. This section examines AgriSETA's positioning within the National Development Plan (NDP) and related frameworks, highlighting key synergies, constraints, and opportunities for advancing sustainable agricultural development.

The NDP 2030 provides South Africa with a long-term blueprint for inclusive growth, human capability development, and structural transformation. Learnerships, particularly in agriculture,

intersect with several strategic priorities outlined in the NDP, positioning AgriSETA programmes as important mechanisms for advancing national development commitments (AgriSETA, 2025).

The NDP emphasises eliminating poverty and reducing inequality by expanding employment opportunities, strengthening productive sectors, and increasing youth participation in the economy. Agriculture is identified as a central driver of rural livelihoods, food security, and labour absorption. AgriSETA learnerships contribute to these aims by equipping trainees with practical skills, sector-specific competencies, and foundational capabilities required to participate meaningfully in agricultural value chains (AgriSETA, 2023).

Chapter 3 of the NDP emphasises the need for a capable, skilled, and adaptable workforce that is responsive to rapidly changing labour market demands. Agricultural learnerships support this priority by combining structured instruction with practical workplace experience, enabling trainees to gain technical proficiency and gain real-world exposure. This dual approach aligns with the NDP's vision for a population that is adaptive, competitive, and work-ready (SAIIA, 2023)

Chapter 6 of the NDP focuses on rural development, integrated value chains, and inclusive agricultural growth. Learnerships strengthen rural capabilities by fostering technical knowledge, promoting sustainable production practices, and enabling young people to enter emerging farming pathways. By addressing the shortage of skilled agricultural practitioners, learnerships help support the NDP's call for stronger rural production systems and inclusive agricultural transformation (Makamane & Khetsha, 2024).

The NDP also prioritises support for small enterprises, improved market access, and stronger institutional coordination. Many of these challenges mirror the constraints identified in later chapters of this thesis, especially those related to limited access to finance, insecure production spaces, and fragmented post-training support systems. These systemic weaknesses reduce the ease with which learnership graduates transition into viable economic activity and reflect broader coordination challenges flagged in the NDP (Ndlovu & Masuku, 2021).

Furthermore, the NDP calls for strengthening the post-school education and training system, with emphasis on aligning curriculum content with labour market requirements. AgriSETA learnerships form part of this reform agenda. However, uneven integration of business and digital competencies reveals a gap between policy aspirations and implementation. Addressing these

curriculum and delivery gaps would help ensure more consistent alignment with the NDP's ambitions for a responsive and future-oriented skills system (DHET, 2023).

Finally, the NDP highlights the importance of innovation-driven and environmentally sustainable growth. Agricultural learnerships can support this vision by integrating digital literacy, climate-smart practices, and innovation-oriented pedagogies into programme design. These elements are becoming increasingly important in rural areas, where technological shifts and climate pressures are reshaping production systems and market dynamics (Olabanji & Chitakira, 2025).

The intersections between the NDP and AgriSETA programmes underscore the developmental role of learnerships within South Africa's broader skills ecosystem. Strengthening these linkages requires improved institutional coordination, enhanced curriculum relevance, and robust post-training support. These themes recur across this study and reinforce the central argument that learnerships achieve their highest impact when aligned with integrated national development priorities.

2.14.1.1 AgriSETA's Role in the National Development Framework

AgriSETA plays a pivotal role in advancing the objectives of the National Development Plan, particularly those related to rural development, employment creation, and poverty reduction. The NDP 2030 emphasises strengthening rural productive capacity through improved skills, innovation, and access to resources. AgriSETA contributes to this mandate by designing and delivering training programmes that develop technical and entrepreneurial capability among rural communities (AgriSETA, 2025).

AgriSETA's activities also align with the Agricultural Policy Action Plan, which seeks to increase agricultural output, promote sustainable land use, and strengthen climate-resilient production systems. Through targeted training initiatives in areas such as agro-processing, irrigation management, and sustainable farming, AgriSETA addresses priority skills shortages and helps advance national objectives for sustainable agricultural growth (AgriSETA, 2025).

2.14.1.2 Bridging Gaps Between Policy and Practice

While AgriSETA's mandate aligns closely with national development priorities, translating policy commitments into tangible outcomes remains challenging. Limited coordination among

government departments, SETAs, and agricultural actors weakens the integration of vocational training into broader development agendas (Tekwa, 2024). This fragmentation constrains impact and complicates efforts to scale successful interventions.

Financial limitations and inadequate training infrastructure further restrict effective implementation. Many rural training centres lack modern equipment, technology-enabled tools, and sufficient physical resources to deliver industry-aligned training. These constraints limit the capacity of learnerships to respond to evolving sectoral needs and emerging opportunities within the agricultural economy (AgriSETA, 2024).

2.14.1.3 Sustainability and AgriSETA's Contribution to National Goals

AgriSETA contributes to sustainability objectives articulated in the NDP and in global frameworks such as the Sustainable Development Goals. Its programmes increasingly incorporate training on climate-resilient agriculture, sustainable production systems, and resource-efficient practices, helping reduce environmental vulnerability and support long-term sector viability (AgriSETA, 2025).

The intersection between AgriSETA and national development plans highlights the importance of aligning sectoral initiatives with broader socio-economic and environmental priorities. Addressing implementation challenges through improved collaboration, coordinated structures, and stable resourcing will enhance AgriSETA's contribution to national development. Sustained multi-stakeholder commitment remains essential to ensure that learnership interventions support South Africa's vision for inclusive and sustainable agricultural transformation.

2.14.2 Effectiveness of Public-Private Partnerships in Agri-Entrepreneurship Training

Public-Private Partnerships (PPPs) have become a crucial mechanism for enhancing agri-entrepreneurship training by leveraging the complementary strengths of government, industry, and development partners. These collaborations support skills development, expand access to technology, and improve market participation, particularly in contexts where public resources or institutional capacity alone are insufficient. In South Africa and comparable regions, PPPs are increasingly used to address agricultural skills shortages, accelerate technology adoption, and promote sustainable farming practices, positioning them as a critical instrument within meso-level implementation systems.

2.14.2.1 Strengthening Resource Mobilisation

PPPs enhance resource mobilisation by pooling infrastructure, funding, technical expertise, and policy support from multiple stakeholders. Governments typically provide regulatory frameworks and enabling conditions, while private entities contribute innovation, industry knowledge, and financial investment. This shared approach helps overcome resource constraints that often limit the reach and quality of agri-entrepreneurship training. Partnerships that support drought-tolerant seed development, improved inputs, or regional agricultural innovations illustrate how pooled resources can address sector-specific skills needs and strengthen rural training capacity (Pandey et al., 2025).

2.14.2.2 Enhancing Access to Advanced Technologies

One of the most significant contributions of PPPs is their ability to reduce technological disparities between smallholder farmers and commercial producers. Through collaborative projects, trainees gain exposure to improved seed varieties, precision farming tools, and climate-resilient production technologies. Such initiatives demonstrate how PPPs can accelerate technology transfer, improve agricultural efficiency, and strengthen the readiness of emerging agri-entrepreneurs to operate within modern agricultural value chains (Pandey et al., 2025).

2.14.2.3 Promoting Capacity Building and Knowledge Transfer

PPPs play an important role in capacity building by integrating private sector expertise into structured training and mentorship programmes. Industry partners contribute specialist knowledge on production standards, certification requirements, quality assurance, and market dynamics, while public institutions ensure that training remains inclusive and aligned with national development goals. These partnerships enhance both the quality and the relevance of agri-entrepreneurship training, enabling trainees to meet the demands of increasingly sophisticated agricultural markets (ETF, 2021).

2.14.2.4 Facilitating Market Integration

A core advantage of PPPs is their ability to strengthen market integration for emerging farmers. Many partnerships support value-chain development, product quality improvements, and compliance with market standards. By establishing linkages to domestic and international buyers,

PPP-driven initiatives help farmers shift from subsistence to commercially viable production. Improved market access enhances income security, supports enterprise development, and strengthens the economic resilience of rural communities (Nyabvudzi & Nkwana, 2024).

2.14.2.5 Addressing Sustainability Challenges

PPPs also contribute to environmental and economic sustainability by promoting climate-resilient farming practices, resource-efficient technologies, and sustainable input management. Initiatives that encourage conservation agriculture, water-efficient production, and climate-smart technologies demonstrate how cross-sector collaboration can advance environmental stewardship while supporting production goals. These contributions are essential for strengthening long-term sector viability, particularly in contexts vulnerable to climate variability (Olabanji & Chitakira, 2025).

Public-Private Partnerships, therefore, represent a transformative mechanism for strengthening agri-entrepreneurship training. Their ability to mobilise resources, transfer technology, build capacity, expand market access, and promote sustainability positions them as a critical meso-level component of agricultural skills development and a strategic enabler of inclusive sectoral growth.

2.14.3 Regional Disparities in Learnership Implementation

Regional disparities significantly shape the effectiveness of learnership implementation in South Africa. Differences in socio-economic conditions, infrastructure, institutional capacity, and policy support contribute to uneven access, inconsistent programme quality, and unequal employment outcomes. These disparities weaken national ambitions for equitable development and highlight the need for context-responsive approaches within the vocational training system.

2.14.3.1 Disparities in Access to Training Opportunities

Access to learnerships varies sharply between urban and rural regions. Urban areas generally benefit from better infrastructure, well-equipped training facilities, qualified trainers, and strong industry partnerships, all of which support effective programme delivery. Rural areas, including large parts of the Eastern Cape Province, face logistical constraints such as weak transport networks, limited facilities, and fewer employer partnerships (Agumba et al., 2023). Travel costs

and long commuting distances discourage participation, and evidence from youth employment programmes shows higher dropout rates among rural learners due to the financial burden of commuting (Mtotywa & Motaung, 2024).

2.14.3.2 Inconsistent Resource Allocation

Provincial differences in economic capacity contribute to uneven resource distribution for learnership implementation. Provinces with stronger economies attract more funding, enabling the delivery of comprehensive, industry-responsive programmes. In contrast, less-resourced provinces struggle to access adequate funding, resulting in weaker training provision and limited support services. These disparities reinforce unequal skills development and employment opportunities across regions (BankSETA, 2025).

2.14.3.3 Variability in Programme Design and Delivery

Programme design and delivery differ considerably across provinces. Some regions tailor learnership programmes to meet local sectoral needs, producing better employment outcomes. Others rely on generic programmes that do not reflect regional economies. This misalignment reduces the relevance of training and weakens labour market integration. Examples include provinces with potential in fishing, forestry, or tourism failing to embed relevant sector-specific competencies within their programmes (BankSETA, 2025).

2.14.3.4 Challenges in Monitoring and Evaluation

Monitoring and evaluation (M&E) systems vary widely across provinces. Regions with stronger M&E capacity are better able to track outcomes, identify implementation gaps, and drive continuous improvement. Provinces with limited monitoring and evaluation (M&E) capabilities struggle to monitor learner progression, assess programme quality, or adapt training interventions to emerging needs (Ward & Rosenberg, 2020). These inconsistencies lead to uneven accountability and hinder long-term programme refinement.

2.14.3.5 Socio-Cultural Barriers

Socio-cultural norms influence learnership participation, particularly among women and marginalised groups. Gendered labour expectations, limited community awareness, and cultural constraints shape participation patterns and contribute to inequitable access to resources.

Addressing these barriers is crucial to ensure inclusivity and broaden participation in rural and traditionally underrepresented communities (Ebrahimi et al., 2022).

Regional disparities, therefore, present a significant obstacle to equitable learnership outcomes. Addressing these challenges requires targeted, context-sensitive strategies that align programme design, funding, and support mechanisms with local conditions. Strengthening regional systems is essential for ensuring that learnerships deliver meaningful benefits across all provinces, particularly within marginalised rural areas.

2.14.4 Key Legislative and Regulatory Instruments

South Africa's learnership system is supported by a comprehensive legislative and regulatory framework designed to align workforce development with national socio-economic and sustainability priorities. These instruments ensure that learnerships are standardised, quality-assured, and responsive to changing labour market requirements. They also provide the structural mechanisms through which national development goals are translated into practical skills interventions.

A central component of this framework is the National Skills Development Strategy, which outlines strategic objectives for skills development, employment creation, and social transformation. The Strategy emphasises inclusivity by prioritising access for youth, women, and persons with disabilities. It reflects global commitments to quality education and decent work by aligning with broader development principles related to equity, employability, and economic participation (O'Neil et al., 2023).

The Skills Development Act and the Skills Development Levies Act provide the statutory foundation for the establishment and functioning of Sector Education and Training Authorities. SETAs are responsible for designing, funding, managing, and quality-assuring learnership programmes within their respective sectors. Their mandate includes identifying skills gaps, ensuring curriculum relevance, overseeing provider accreditation, and maintaining alignment between training content and industry standards (World Bank, 2020).

Continental and regional frameworks further shape the governance of learnerships. The African Union's Agenda 2063 emphasises inclusive growth, improved skills development systems, and regional coherence in education and training. Aligning national learnership programmes with

these continental priorities contributes to more coordinated and development-oriented skills ecosystems (ILO, 2024).

At an international level, the International Labour Organisation provides normative guidance on workforce development. These guidelines emphasise the importance of decent work, gender equality, and integrating sustainability and green skills into vocational programmes. Such principles support South Africa's efforts to modernise its training systems and ensure their relevance within a rapidly changing global labour market (ILO, 2022).

These legislative and regulatory instruments create the foundation for ensuring that learnerships are coherent, relevant, and capable of contributing to national development objectives. Their practical implementation is essential for ensuring that vocational training systems support equitable, sustainable, and inclusive outcomes.

2.14.5 Institutional Structures and Stakeholder Roles in Learnership Programmes

The implementation of learnership programmes relies on the coordinated involvement of multiple institutional structures and stakeholders at the meso level. These include government agencies, educational institutions, private sector organisations, and non-governmental organisations. Each stakeholder contributes distinct capabilities that, when effectively aligned, support skills development, address labour market shortages, and advance socio-economic transformation (O'Neil et al., 2023). Understanding these roles is essential for assessing programme effectiveness and identifying areas for strengthening governance and delivery.

2.14.5.1 Government Agencies and Policy Oversight

Government agencies are responsible for shaping the national skills development agenda and ensuring that learnerships align with strategic socio-economic objectives. The Department of Higher Education and Training provides overall policy direction, develops regulatory frameworks, and ensures that learnerships respond to labour market needs. The National Skills Development Strategy outlines national priorities for employability, inclusivity, and workforce development (O'Neil et al., 2023).

The Skills Development Act establishes Sector Education and Training Authorities, which oversee industry-specific learnerships. SETAs manage programme design, funding, quality

assurance, and employer coordination, ensuring that training remains relevant to sectoral demands and national development priorities (Botha et al., 2023). This structure provides a bridge between policy goals and operational implementation.

2.14.5.2 Role of Educational Institutions

Educational institutions, including TVET colleges, universities, and accredited private providers, deliver the theoretical components of learnerships. They support the development of foundational knowledge, promote competency acquisition, and prepare learners for workplace integration. Collaboration with employers helps ensure that curricula remain responsive to technological advances and changing industry requirements (Njengele et al., 2024).

These institutions also facilitate accreditation and certification under the National Qualifications Framework, ensuring that learnerships meet national quality standards. Many institutions contribute to research and curriculum development, supporting continuous improvement and greater alignment with sectoral needs (Alphonsus & Schmees, 2025).

2.14.5.3 Private Sector Involvement

The private sector plays a critical role by hosting trainees and providing workplace-based learning opportunities. Employers offer practical experience, operational insight, and mentorship, bridging the gap between theoretical instruction and real-world application. This partnership strengthens trainees' readiness for employment and ensures closer alignment between training and industry requirements (O'Neil et al., 2023).

Incentives such as tax rebates and skills development levy benefits encourage employer participation. Businesses also gain access to emerging talent and develop a workforce equipped with skills tailored to their operational needs. This reciprocal arrangement reinforces the private sector's role as a strategic partner in national skills development (Allais & Ngcwangu, 2025).

2.14.5.4 Non-Governmental and Community-Based Organisations

Non-governmental and community-based organisations contribute by promoting inclusivity and supporting equitable access to learnerships for learners. They provide mentorship, counselling, advocacy, and awareness campaigns, helping address socio-cultural and structural barriers that limit participation for groups such as women, rural youth, and persons with disabilities (Mosia &

Lephoto, 2023).

NGOs also participate in policy dialogue, drawing attention to the needs of vulnerable groups and promoting the design of inclusive training interventions. Their involvement strengthens national commitments to reducing inequalities and improving access to decent work opportunities (Goldberg & Kleintjes, 2022).

2.14.5.5 Coordination and Collaboration Mechanisms

Effective coordination mechanisms are essential for ensuring coherence across stakeholder roles. Multi-stakeholder forums, advisory committees, and partnership platforms facilitate communication, alignment, and joint problem-solving. These structures support resource sharing, enhance programme relevance, and help address implementation challenges (Reznikova et al., 2024).

Strengthening collaboration among government, educational institutions, industry partners, and civil society organisations is central to improving the efficiency and long-term impact of learnership programmes. Enhanced coordination, consistent policy alignment, and stable funding will help ensure that learnerships continue to bridge the gap between education and employment, contributing meaningfully to South Africa's development trajectory.

2.14.6 Policy Implementation and Challenges in Learnership Programmes

Implementing legislative and regulatory frameworks at the meso level requires strategic coordination, stable funding, and alignment among diverse stakeholders. While these frameworks provide a solid foundation for learnership design and delivery, several persistent challenges limit their effectiveness and scalability. Understanding these barriers is essential for translating policy intent into sustainable, high-quality vocational programmes that respond to labour market needs (Mtotywa & Motaung, 2024).

2.14.6.1 Challenges in Policy Implementation

Learnership programmes face various implementation challenges, including funding, labour market alignment, stakeholder coordination, and monitoring and evaluation. A significant constraint is inadequate and inconsistent funding. Budget limitations undermine programme quality, restrict access for marginalised groups, and limit investment in infrastructure,

technology, and qualified trainers (Mtotywa & Motaung, 2024).

Because learnerships rely heavily on public financing and employer contributions, financial instability can disrupt continuity and weaken long-term impact. More sustainable funding mechanisms, supported by public-private partnerships and targeted incentives, could help address these constraints.

Policy rigidity and misalignment with labour market needs present additional challenges. When policies are slow to respond to technological change or evolving industry requirements, training programmes risk producing graduates whose skills are outdated or misaligned with demand. Regular engagement with employers and the adoption of flexible, demand-driven curricula are essential to ensure relevance and responsiveness (Allais & Ngcwangu, 2025).

Stakeholder fragmentation further complicates implementation. Differing mandates and siloed operations across government departments, SETAs, training providers, employers, and civil society organisations often result in duplication, inefficiency, and inconsistent communication. Establishing central coordination mechanisms, such as provincial skills forums or multi-stakeholder committees, can improve coherence and reduce operational bottlenecks (Mende et al., 2025).

Monitoring and evaluation weaknesses also limit the effectiveness of the programme. Many learnerships lack comprehensive or standardised M&E frameworks, making it challenging to track learner progression, assess programme outcomes, or identify areas requiring improvement. Strengthening data collection, adopting digital tracking systems, and embedding analytics into programme management can enhance accountability and support evidence-based policy refinement (Mtotywa & Motaung, 2024).

2.14.7 Innovations and Best Practices in Learnership Programmes

Innovative approaches and best practices are increasingly important for enhancing the relevance, accessibility, and effectiveness of learnership programmes. By integrating technology, strengthening partnerships, and promoting continuous improvement, learnerships can remain responsive to evolving labour market demands and global development priorities (Njengele et al., 2024).

2.14.7.1 Digital Innovations in Learnerships

Digital learning platforms have become one of the most transformative developments in vocational training. These platforms expand access to learning opportunities, especially for participants in remote or underserved regions. Blended learning models, which combine online instruction with workplace-based training, help overcome geographical barriers and support greater flexibility in programme delivery (Hu et al., 2024).

Virtual simulations, interactive modules, and e-learning tools enhance learner engagement and enable self-paced study. Artificial Intelligence and data analytics further support personalised learning through real-time feedback, performance tracking, and the identification of learning gaps. These innovations strengthen monitoring systems and contribute to improved programme quality and learner outcomes (Çela et al., 2024).

2.14.7.2 Public-Private Partnerships and Stakeholder Collaboration

Public-Private Partnerships remain a central feature of effective learnership implementation. Collaboration between government, training providers, and industry stakeholders ensures that curricula remain market-relevant and aligned with technological advancements. Co-funded initiatives demonstrate how partnerships can address sector-specific skills shortages and support programme sustainability (HCLS, 2025).

These collaborations also improve employment outcomes by linking trainees to industry networks, workplace opportunities, and professional support systems. Strong multi-stakeholder engagement is therefore essential for ensuring that learnerships remain responsive to industry demand (Ismail & Mujuru, 2020).

2.14.7.3 International Knowledge Sharing and Benchmarking

International knowledge exchange provides valuable opportunities to strengthen learnership systems. Cross-border collaboration enables stakeholders to adapt successful models, learn from global trends, and benchmark performance against international standards. Regional initiatives facilitate mobility and support mutual recognition of qualifications, contributing to more integrated skills development ecosystems (Odjo, 2024).

Engagement with international competency-based frameworks, industry-recognised

certifications, and sustainability-focused training models supports continuous refinement and ensures the long-term relevance of the programme (Maya Ortiz, 2024).

2.14.7.4 Focus on Green Skills Development

The integration of green skills has become an important innovation as economies transition to low-carbon, resource-efficient systems. Learnerships increasingly incorporate training related to renewable energy, sustainable agriculture, circular economy processes, and climate-resilient production. Embedding green skills aligns vocational training with global environmental priorities, strengthening opportunities for employment in emerging green industries (Mesuwini et al., 2025).

This emphasis supports national commitments to sustainability and ensures that learners are equipped to contribute to climate action and responsible production systems.

2.14.7.5 Adaptive Programme Design and Continuous Improvement

Adaptive programme design is essential for ensuring responsiveness to evolving socio-economic conditions and labour market expectations. By integrating continuous feedback from trainees, employers, and training providers, programmes can refine their content, delivery methods, and assessment processes (Samlawi & Norviana, 2025).

Regular stakeholder engagement through advisory panels, consultations, and innovation hubs supports iterative development and encourages experimentation with new methodologies. Pilot projects offer opportunities to test innovative approaches before their broader implementation, thereby contributing to improved relevance and long-term impact (Dangarembwa, 2025).

The meso context demonstrates that effective learnership implementation depends on strong legislative and regulatory frameworks supported by coordinated stakeholder engagement. Positioned between macro-level policy intent and micro-level delivery, these structures ensure alignment with labour market needs, support equitable access, and advance national development priorities.

Realising the full potential of learnerships requires continuous refinement of funding mechanisms, improved coordination, stronger monitoring and evaluation systems, and integration of digital and green innovations. When supported by robust governance and collaborative

partnerships, these innovations enable learnerships to make meaningful contributions to inclusive and sustainable socio-economic transformation.

At the meso level, institutional arrangements and programme implementation practices play a significant role in shaping training outcomes. Variations in curriculum delivery, quality of workplace exposure, availability of mentorship, and coordination among training stakeholders may influence participants' ability to translate acquired competencies into entrepreneurial activities. Understanding these institutional dynamics is therefore essential for assessing the effectiveness of learnership programmes, particularly within sector-specific training systems such as AgriSETA.

2.15 MICRO CONTEXT

The micro context focuses on the individual and course-specific dimensions of learnerships, where the most direct interactions occur between trainees, facilitators, curriculum content, and delivery modalities. This level highlights the practical realities that shape learner engagement, performance, and progression. It encompasses technology adoption, pedagogical approaches, trainee motivations, cultural influences, assessment quality, and the availability of learner support structures (Sespeñe et al., 2021).

Micro-level factors are crucial in determining whether learnerships produce graduates who are competent, confident, and adaptable. Elements such as trainee demographics, delivery methods, feedback quality, digital readiness, and psychosocial support influence both learning outcomes and the overall effectiveness of vocational programmes. When these components are responsive to learner needs and aligned with programme objectives, they improve retention, strengthen skill acquisition, and support transitions into employment or self-employment (Zervas & Stiakakis, 2024).

This section begins with an examination of technology-driven enhancements that are reshaping the delivery of learnerships and enabling more accessible, flexible, and personalised vocational learning environments.

2.15.1 Technology-Driven Enhancements in Learnership Delivery

Technology has become a transformative force within vocational education, reshaping how

learnerships are delivered, assessed, and experienced. Advances in artificial intelligence (AI), virtual and augmented reality (VR and AR), digital learning platforms, and mobile technologies have expanded the possibilities for flexible, accessible, and interactive training environments. These innovations enhance engagement and provide more tailored learning support, although they also introduce new implementation challenges that require careful planning (Leong, 2025).

2.15.1.1 Digitalisation, Blended Learning, and Technology-Enhanced Agricultural Training

Digitalisation is reshaping vocational training systems worldwide, with growing emphasis on technology-mediated instruction, blended learning, and digital assessment practices. These shifts reflect changes in labour market demands and the increasing integration of digital tools into production systems, including agriculture (OECD, 2025). As a result, vocational programmes are expected to produce graduates who can navigate digital platforms and apply technology-based solutions in workplace contexts.

In agriculture, digitalisation encompasses precision farming technologies, remote sensing tools, mobile extension services, and digital finance applications. Integrating these elements into vocational curricula enhances learners' exposure to modern agricultural practices and strengthens their readiness to participate in technology-intensive value chains. However, capacity for digital integration remains uneven, particularly in rural areas where connectivity, device availability, and institutional readiness are limited (Nxumalo & Chauke, 2025).

Blended learning has emerged as a practical approach for improving flexibility and expanding access to agricultural training. This model combines in-person instruction with online components, enabling trainees to engage with theoretical content remotely while reserving classroom time for practical tasks and problem-solving. For geographically dispersed learners, blended learning helps overcome transport barriers and accommodates seasonal labour responsibilities (Panyakom et al., 2020).

Mobile learning platforms provide an accessible and cost-effective means of delivering learning materials, administering brief assessments, and facilitating ongoing engagement. Evidence from low- and middle-income countries suggests that mobile-based learning enhances participation and retention, particularly in areas where traditional infrastructure is limited (Naveed et al., 2022). Within AgriSETA programmes, mobile learning plays a crucial role during workplace

placements, where trainees often have limited access to formal classroom environments.

Despite these benefits, digitalisation presents challenges. Persistent digital divides limit the effective use of technology-enhanced training. Factors such as data costs, device shortages, electricity instability, and weak institutional digital capacity contribute to uneven learner experiences, thereby widening performance gaps between well-resourced and under-resourced institutions. Facilitators often lack confidence in digital teaching methods, leading to inconsistent integration of available tools. Targeted professional development is therefore essential for strengthening digital pedagogy and improving instructional quality (Roselidyawaty et al., 2025).

Strengthening digitalisation within AgriSETA learnerships requires coordinated investment across curriculum design, facilitator development, infrastructure provision, and assessment reform. Embedding digital literacy as a compulsory competence across qualifications would support a more modern and adaptable agricultural workforce. Developing digital simulations, interactive case studies, and technology-based assessments would further enhance the application of learning. Overall, digitalisation represents both an opportunity and a challenge, reinforcing the broader argument that meaningful capability development requires systemic coordination across learning environments.

2.15.1.2 Integration of Digital Learning Platforms

Digital learning platforms, particularly Learning Management Systems (LMSs), are now integral to learnership delivery. They enable trainees to access materials remotely, submit assessments, communicate with facilitators, and track progress. Their flexibility supports diverse learning needs, particularly for trainees who face geographic or time-related constraints. Evidence from the W and R SETA suggests that the adoption of digital platforms has enhanced digital literacy and strengthened readiness for technology-driven workplaces (Simelane-Mnisi, 2023).

2.15.1.3 Virtual Reality (VR) and Augmented Reality (AR)

VR and AR expand opportunities for experiential learning by simulating real-world environments. VR is effective for practising high-risk or resource-intensive activities, such as operating machinery or applying chemicals. AR enhances hands-on tasks by overlaying digital prompts onto physical objects, supporting greater accuracy, comprehension, and task efficiency (Long et al., 2025).

2.15.1.4 Artificial Intelligence and Personalised Learning

AI supports personalised learning through adaptive content, real-time performance analysis, and predictive analytics. AI-driven platforms identify learning gaps, adjust content difficulty, and prompt timely facilitator intervention to address these gaps. These personalised support mechanisms improve engagement and reduce the risk of learners falling behind (Tan et al., 2025).

2.15.1.5 Blended Learning Approaches

Blended learning supports diverse learning styles and provides continuity during disruptions such as transport difficulties or weather interruptions. Evidence from institutions such as Durban University of Technology indicates that blended models enhance learner autonomy and can improve completion rates (Ndaba & Dube, 2022).

2.15.1.6 Mobile Learning and Accessibility

Mobile learning increases access to vocational training, particularly in remote or underserved areas. Mobile-compatible platforms enable trainees to access lessons, assessments, and support materials using smartphones, thereby reducing barriers associated with limited computer access. Evidence from W and R SETA programmes shows higher participation in communities where mobile connectivity is more reliable than traditional ICT infrastructure (Okai-Ugbaje et al., 2022).

2.15.1.7 Gamification in Learnerships

Gamification strategies, including badges, quizzes, challenges, and rewards, enhance motivation and engagement. These interactive techniques are particularly effective for younger learners, as they support retention, participation, and conceptual understanding (Ukgoda, 2025).

Technology integration represents a significant shift in how vocational education is designed and delivered. While digital and immersive tools strengthen flexibility and learner-centred approaches, their successful adoption depends on sustained investment, facilitator development, and coordinated implementation. Addressing these requirements will be essential for realising the full benefits of technology-enhanced learnerships within AgriSETA and similar training systems (Riyanda et al., 2025).

2.15.2 Cultural Influences on Trainee Engagement

Cultural factors play a significant role in shaping trainee engagement by influencing values, expectations, communication styles, and attitudes toward learning. These dynamics influence how trainees engage with programme content, facilitators, and peers, underscoring the importance of culturally responsive approaches within learnership environments (Ulum, 2025). In a culturally diverse country such as South Africa, recognising these influences is essential for improving participation, retention, and learning outcomes.

2.15.2.1 The Role of Cultural Norms in Learning Preferences

Cultural norms shape learning preferences by influencing how individuals process information and participate in instructional activities. Collectivist cultures, common across many African and Asian contexts, tend to prioritise cooperative learning and shared problem-solving, making group-based and community-centred pedagogies particularly effective (Wang, 2024). Individualist cultures, by contrast, often favour self-directed learning and independent engagement.

South Africa's cultural diversity requires flexible pedagogical approaches. Trainees from rural communities often respond more positively to experiential and community-driven learning, while those from urban settings may have greater familiarity with structured classroom practices (Agumba et al., 2023).

2.15.2.2 Language and Communication Styles

Language has a significant impact on comprehension, confidence, and participation. In multilingual settings, trainees may face barriers when instruction is delivered in a language other than their home language. Evidence suggests that engagement increases when learning materials and instruction are presented in familiar languages or supported through translation and simplified communication strategies (Probyn, 2024). This is especially important in regions where Indigenous languages are the primary means of daily interaction.

2.15.2.3 Cultural Attitudes Toward Authority and Feedback

Cultural norms related to authority influence how trainees interact with facilitators. In hierarchical cultures, questioning instructors or offering critical feedback may be perceived as inappropriate,

leading to passive learning behaviours and limited verbal participation. More egalitarian cultures encourage open dialogue, questioning, and critical engagement, supporting participatory learning environments (Wang, 2024). Facilitators must navigate these dynamics sensitively to create supportive spaces for discussion while respecting cultural expectations.

2.15.2.4 Gender and Socio-Cultural Expectations

Gender norms also shape trainee engagement. In settings where patriarchal social structures are prevalent, women may face barriers such as domestic responsibilities, restricted mobility, or cultural resistance to female participation in training. Gender-responsive strategies, including flexible scheduling, childcare support, and community sensitisation, have been shown to enhance participation and retention for women in vocational programmes (Ray & Zarestky, 2021).

2.15.2.5 Family and Community Influence

Family and community expectations strongly influence enrolment decisions, persistence, and learning motivation. In collectivist contexts, community endorsement often strengthens trainee commitment. Learnerships that incorporate family or community engagement elements tend to achieve higher levels of participation and retention, especially in rural areas (Simweleba & Serpell, 2020). Such alignment reinforces learner motivation and creates a shared sense of responsibility for educational success.

A nuanced understanding of cultural influences is essential for designing equitable and responsive learnerships. Culturally sensitive pedagogies, linguistic inclusivity, and strategies that address socio-cultural barriers can significantly strengthen engagement, improve learning outcomes, and enhance the developmental impact of vocational training programmes (Wentworth & Martin, 2025).

2.15.3 Integration of Soft Skills in Learnership Curricula

Soft skills are an essential component of learnership curricula because they complement technical competencies and prepare trainees for the demands of modern workplaces. Competencies such as communication, teamwork, leadership, and critical thinking enhance employability, support entrepreneurial capabilities, and improve adaptability in dynamic labour markets (Mwita et al., 2024). These attributes are vital in agriculture, where trainees must navigate variable production

conditions, resource constraints, and rapidly changing market environments.

2.15.3.1 The Role of Soft Skills in Learnership Programmes

Soft skills, often described as interpersonal or behavioural competencies, enable effective collaboration, clear communication, and productive workplace engagement. Evidence indicates that embedding these skills within vocational programmes improves employability and enhances entrepreneurial readiness (Romanova, 2022). In agricultural contexts, critical thinking supports decision-making in situations involving climate variability, input scarcity, and market uncertainty, reinforcing the value of integrating soft skills alongside technical training.

2.15.3.2 Key Soft Skills for Vocational Success

Communication is foundational to workplace success. Strong verbal and written communication supports collaboration, negotiation, and stakeholder engagement, which are essential for both employment and entrepreneurship (Deshmukh & Kumar, 2025).

Leadership development contributes to enhancing trainee confidence, improving project coordination, and promoting professional conduct. Integrating leadership training into vocational education strengthens workplace readiness and supports emerging entrepreneurial activity (Chaitanya et al., 2025).

Critical thinking and problem-solving are increasingly important in sectors that demand innovation and context-sensitive judgment. In agriculture, these skills enable trainees to analyse information, assess risks, and respond effectively to production or market challenges (López et al., 2023).

2.15.3.3 Methods for Integrating Soft Skills

Soft skills are most effectively developed through practical and contextually relevant methods. Case studies and simulations expose trainees to real-world scenarios, strengthening their decision-making by enabling the application of interpersonal and cognitive skills in realistic contexts (Boonheang & Cojorn, 2025).

Collaborative learning activities, such as group projects and peer discussions, foster teamwork, communication, and collective problem-solving. These methods mirror workplace dynamics and

reinforce interpersonal competence. Short modules focusing on leadership, negotiation, and conflict management provide structured opportunities for targeted skill development (Ruijuan et al., 2024).

Assessment tools, including observational protocols and structured checklists, support facilitators in monitoring progress and offering formative feedback, enabling continuous improvement in soft skill development (Ogondiek, 2024).

2.15.4 Trainee Characteristics and Motivations

Trainee characteristics and motivations strongly influence engagement, retention, and performance within learnership programmes. Participants typically come from diverse demographic and socio-economic backgrounds, including youth, women, and individuals from marginalised communities, each bringing distinct experiences and expectations that shape their learning pathways (Mugambi et al., 2022).

Many trainees are motivated by the prospect of acquiring practical skills and securing employment. Others pursue learnerships for career progression, sectoral mobility, or entrepreneurial development. Broader socio-economic realities, including high unemployment rates, limited access to higher education, and financial constraints, often shape these motivations. Ensuring equitable access to learnerships is therefore essential for supporting social mobility and reducing structural inequality (Mustajab & Irawan, 2023).

Trainees also exhibit a range of cognitive and non-cognitive attributes, including resilience, adaptability, and emerging problem-solving abilities. Programmes that intentionally recognise and support these attributes tend to achieve stronger engagement and higher completion rates. Support mechanisms, including career counselling, diagnostic skills assessments, and personalised guidance, help trainees set realistic goals and pursue learning pathways aligned with their strengths (Sultanova et al., 2024).

Socio-cultural factors further influence participation and motivation. Family expectations, community perceptions, and cultural norms can either enable or constrain involvement, particularly for women and other underrepresented groups. Community-level engagement and awareness initiatives are important for reducing these barriers and promoting inclusion within vocational programmes (Otu, 2025).

A nuanced understanding of trainee characteristics and motivations is therefore essential for designing learner-centred interventions that reinforce successful outcomes. Tailoring programme delivery to diverse learner profiles strengthens engagement, enhances completion, and ensures that learnerships contribute meaningfully to skills development and broader sustainable development objectives.

2.15.5 Trainee Engagement and Motivation

Trainee engagement and motivation are critical determinants of learnership effectiveness. Course design and the pedagogical approaches adopted shape how trainees interact with content and develop the competencies required for employment. When course content is well-aligned with industry needs, trainees are more likely to recognise the relevance of their learning, which strengthens motivation and supports broader priorities, such as SDG 4 on quality education and SDG 8 on decent work (McGrath & Yamada, 2023).

Modular course structures contribute to improved engagement by allowing trainees to develop skills in a progressive manner. This scaffolded approach accommodates diverse learning styles and supports mastery of foundational concepts before progression to more complex tasks (Hao et al., 2021).

Problem-based and project-based methods further enhance engagement by promoting critical thinking, practical problem-solving, and the application of knowledge to real-world challenges. These approaches help trainees build confidence and develop the workplace judgement expected in dynamic employment environments. Blended learning and experiential training reinforce these benefits. Blended models offer flexibility through the combination of digital and in-person delivery. At the same time, experiential components such as workplace rotations and simulations enable trainees to apply theoretical learning in authentic contexts (David & Extension, 2024).

Technology supports engagement by enabling interactive, data-informed learning environments. Digital tools, including virtual simulations, collaborative platforms, and gamified activities, enhance participation while generating performance data that can inform targeted instructional support (Zhang et al., 2024).

Soft skills development also plays an important role in sustaining engagement. Competencies such as communication, teamwork, and adaptability complement technical learning,

strengthening workplace readiness and thereby improving overall trainee motivation and long-term outcomes (Awodiji & Magogodi, 2023).

2.15.6 Role of Mentorship and Support Systems

Mentorship and support systems are essential elements of effective learnership programmes because they provide the guidance, encouragement, and resources trainees require to navigate learning demands and develop confidence in their capabilities (Bolton-King, 2022). Mentorship typically involves pairing trainees with experienced professionals who model workplace expectations and help refine both technical and interpersonal skills. These relationships enhance communication, problem-solving, and teamwork, thereby contributing to more comprehensive professional development (Bolton-King, 2022).

Support systems complement mentorship by offering academic advising, career counselling, psychosocial support, and structured learning assistance. Initiatives such as peer mentoring, study groups, and facilitated learning sessions help foster a sense of belonging and encourage collaborative learning among trainees (Le et al., 2024). Practical barriers, including transport costs, financial pressures, and competing household responsibilities, often influence participation and retention. Support mechanisms such as stipends, transport allowances, and flexible scheduling help reduce these burdens and promote equitable access to training opportunities (Nogcantsi & Mbatha, 2025).

Technology has broadened the reach and responsiveness of mentorship and support services. Virtual mentoring platforms expand access to professional networks, while digital communication tools facilitate real-time feedback and personalised guidance. These innovations strengthen the overall quality of learner support and help ensure continuity of engagement, particularly in dispersed or resource-constrained settings (Rotar, 2022).

2.15.7 Assessment and Certification

Assessment and certification are central to ensuring the quality, credibility, and labour market relevance of learnership programmes. They verify skill acquisition and provide employers with confidence in the competence of trainees (Yusop et al., 2022).

Effective assessment systems integrate both formative and summative methods. Formative

assessments, including quizzes, assignments, and peer feedback activities, promote continuous learning and help trainees identify and address gaps in their understanding. Summative assessments, such as final examinations, practical demonstrations, and capstone projects, measure the extent to which programme outcomes have been achieved (Arrogante et al., 2021).

Industry involvement in assessment design is essential for maintaining relevance. Collaboration with employers ensures that assessment criteria reflect current workplace practices, emerging technologies, and sector-specific competency requirements. This alignment improves graduate employability and strengthens employer trust in learnership qualifications (Liang & Comyn, 2025).

Certification formalises the recognition of trainee achievements. Accredited certificates issued by recognised authorities serve as clear signals of competence within the labour market, supporting access to employment and further learning opportunities. The growing adoption of digital credentials enhances portability and visibility, allowing trainees to share electronic certificates and digital badges on professional platforms, thereby increasing their mobility and career prospects (Ngoc Ha et al., 2025).

At the micro level, individual characteristics, access to productive assets, and perceptions of training relevance interact to shape entrepreneurial behaviour following programme participation. While vocational training may enhance technical and managerial competencies, personal resource constraints and socio-economic conditions may limit the ability of beneficiaries to initiate or sustain enterprise activities. This study therefore examines how individual-level experiences and constraints influence the translation of learnership participation into entrepreneurial growth outcomes.

2.16 CONTRIBUTION OF LEARNERSHIPS TO SUSTAINABLE DEVELOPMENT GOALS

Learnerships make a meaningful contribution to the Sustainable Development Goals (SDGs) by expanding human capabilities, strengthening skills ecosystems, and supporting inclusive socio-economic transformation. Their dual structure, which integrates formal theoretical learning with structured workplace exposure, enables them to address multiple development priorities simultaneously (Chola & Kiplagat, 2025). Within South Africa, particularly in the agricultural sector, AgriSETA learnerships play a crucial role in advancing rural development, enhancing

livelihoods, and promoting sustainable growth. This section synthesises insights from the macro, meso, and micro contexts to demonstrate how learnerships contribute to selected SDGs.

2.16.1 Advancing Inclusive and Quality Education (SDG 4)

Learnerships support SDG 4 by providing accessible, accredited, and industry-aligned learning pathways for diverse groups of learners (Selane & Odeku, 2024). Their integrated model enhances practical competence, promotes applied learning, and improves the relevance of vocational education by ensuring alignment between curriculum content and workplace expectations (Gu & Wu, 2025).

For many participants with limited access to higher education, learnerships create opportunities for progression, lifelong learning, and continued professional development. This strengthens the responsiveness and inclusivity of the national post-school education and training system (Norodien-Fataar, 2024).

2.16.2 Supporting Decent Work, Productivity, and Economic Participation (SDG 8)

Learnerships contribute directly to SDG 8 by enhancing employability, addressing sector-specific skills shortages, and facilitating the transition of young people into the workforce (Chola & Kiplagat, 2025). The combination of theoretical instruction and structured workplace experience enhances workplace readiness and strengthens productivity within labour-absorbing sectors such as agriculture (Jordaan et al., 2025).

For rural youth, who often face structural barriers to employment, learnerships provide structured pathways into formal work or self-employment. These outcomes support inclusive and sustainable economic growth, aligning with national priorities, such as the National Development Plan (W&RSETA, 2023).

2.16.3 Reducing Poverty and Strengthening Food Security (SDG 1 and SDG 2)

Agricultural learnerships contribute to achieving SDG 1 by creating pathways out of poverty through improved skills, enhanced employability, and opportunities for income generation (Adesoba, 2023). Trainees acquire the technical competencies necessary to participate productively in agricultural value chains, thereby supporting more sustainable and resilient livelihoods.

Their contribution to SDG 2 is similarly significant. By enhancing agricultural knowledge, production practices, and resource management, learnerships facilitate participation in the food system and strengthen both household and community-level food security (Adesoba, 2023). These effects are particularly significant in rural regions, where agriculture remains a central component of economic stability.

2.16.4 Promoting Gender Equality and Reducing Structural Inequalities (SDG 5 and SDG 10)

Learnerships advance SDG 5 and SDG 10 by expanding access for women, youth, and individuals from historically marginalised communities (Chola & Kiplagat, 2025). By reducing financial, geographical, and institutional barriers to training, learnerships contribute to more equitable participation in the skills system.

For women, participation in agricultural learnerships challenges entrenched gender roles and supports economic agency. Inclusive programme features such as flexible scheduling, community engagement, and support mechanisms further reduce socio-cultural barriers and enhance participation (Babanveer Singh & Tiwari, 2025). These contributions support broader national and global targets focused on reducing inequalities.

2.16.5 Building Innovation Capability and Supporting Climate-Resilient Agriculture (SDG 9 and SDG 13)

Learnerships contribute to SDG 9 by strengthening innovation capability within agricultural systems. Exposure to digital tools, technology-rich learning environments, and emerging production techniques equips trainees with skills suited to increasingly modernised agricultural value chains (Resnick et al., 2020).

Integration of climate-smart agricultural practices further aligns learnership outcomes with SDG 13. Competencies in soil conservation, water efficiency, sustainable input use, and adaptation strategies enable trainees to contribute to environmentally responsible and climate-resilient production systems (Van Staden, 2020). These skills support the long-term viability of the sector and community resilience.

2.16.6 Systemic Constraints Limiting SDG Contribution

Despite their developmental potential, several systemic constraints limit the full contribution of learnerships to the SDGs. These include:

- insufficient post-training support for employment and enterprise development (Sethi et al., 2024).
- regional disparities in infrastructure and delivery quality (Lombo & Subban, 2024).
- weak monitoring and evaluation systems that hinder evidence-based improvement (SADC, 2022).
- fragmented institutional coordination across public and private stakeholders (Mende et al., 2025).
- uneven integration of digital and green skills within curricula, particularly in under-resourced institutions (Mesuwini et al., 2025).

Addressing these constraints is essential for enhancing the developmental impact of learnerships.

2.16.7 Strengthening SDG Alignment Through Policy and Practice

Improving the alignment between learnerships and SDG priorities requires coordinated policy action, strengthened governance, and sustained investment. Key measures include:

- embedding digital competence and climate-smart practices across all agricultural qualifications (Zhong & Juwaheer, 2024).
- expanding structured post-training support to improve employment and enterprise outcomes (Mustajab & Irawan, 2023)
- strengthening public-private partnerships to enhance relevance and workplace quality (Maltseva et al., 2025).
- improving monitoring and evaluation frameworks to track long-term learner outcomes (SADC, 2022).

- promoting inclusive, gender-responsive programme design (Ray & Zarestky, 2021).
- aligning learnership planning with the NDP and sector-specific development strategies (Mthimunye & Malatji, 2024).

These measures will help ensure that AgriSETA learnerships contribute more effectively to national development priorities and global SDG commitments.

2.17 AFRICA VISION 2063 AND LEARNERSHIPS

Agenda 2063, the African Union’s long-term development blueprint, presents a vision for a prosperous, inclusive, and sustainable continent built on skilled human capital, modernised agricultural systems, and innovative economic participation. The framework emphasises the need for youth-focused skills development, strengthened vocational training systems, and expanded opportunities for productive engagement across sectors (AUC, 2025).

These priorities closely intersect with the objectives of learnership programmes in South Africa, particularly within the agricultural sector. This section outlines how learnerships contribute to key aspirations of Agenda 2063 and identifies the conditions needed to enhance their continental relevance.

2.17.1 Agenda 2063 and Human Capital Development

Human capital development is a central pillar of Agenda 2063, which identifies skills, education, and youth empowerment as critical drivers of Africa’s long-term transformation (AUC, 2025). The framework calls for strengthening Technical and Vocational Education and Training (TVET) systems, promoting work-based learning, and expanding access to practical, industry-aligned skills.

Learnerships align closely with these priorities. Their integrated structure, which combines theoretical instruction with workplace learning, reflects the competency-based training model envisioned in Agenda 2063. By creating pathways for upskilling and reskilling, learnerships contribute to a more capable and adaptable labour force, particularly within agriculture, which employs a significant proportion of Africa’s youth.

2.17.2 Aligning Agricultural Learnerships with Continental Agricultural Priorities

Agenda 2063 emphasises agricultural modernisation and rural development through the Comprehensive Africa Agriculture Development Programme (CAADP), which prioritises productivity, food security, and sustainable resource management (AUC, 2025). Learnerships directly support these priorities by equipping trainees with technical, entrepreneurial, and climate-smart agricultural skills.

Agricultural learnerships strengthen practical competence in areas such as sustainable production, agro-processing, and farm management. These capabilities enable young people to participate effectively in local value chains, enhance household resilience, and support community-level food systems. Such outcomes align with continental objectives of reducing hunger, improving nutrition, and transforming agriculture into a driver of inclusive growth (Kirui, 2020).

2.17.3 Partnerships, Collaboration, and Institutional Strengthening

Agenda 2063 underscores the importance of multi-stakeholder collaboration involving governments, private sector actors, NGOs, and regional institutions. These partnerships are viewed as crucial for building capacity, fostering innovation, and scaling up development interventions (AUC, 2025).

In South Africa, learnership implementation already reflects many of these principles. Collaboration among SETAs, government departments, industry bodies, training institutions, and civil society organisations supports the programme's broader reach and enhances the quality of training delivery. Strengthened regional collaboration, including cross-border knowledge exchange and alignment of qualifications frameworks, would further support the continental aspirations embedded in Agenda 2063.

2.17.4 Learnerships as Catalysts for Youth Empowerment and Inclusive Growth

Agenda 2063 emphasises youth empowerment as a fundamental component of Africa's development trajectory. Learnerships contribute to this ambition by enabling young people to acquire work-ready skills, enhance employability, and pursue entrepreneurial pathways.

Within agriculture, these programmes help expand opportunities for emerging farmers, support small enterprise development, and encourage participation in both traditional and modernised

agricultural value chains (Henning & Jordaan, 2024). Such outcomes mirror Agenda 2063's aspirations for inclusive economic participation, reduced inequality, and strengthened rural economies.

2.17.5 Constraints Limiting Alignment with Agenda 2063

Despite their potential, learnerships face several constraints that limit their contribution to the goals of Agenda 2063. These include:

- uneven access to training opportunities, particularly in rural regions (Lombo & Subban, 2024).
- inconsistent training quality due to institutional capacity disparities (Papier & Mawoyo, 2024).
- weak integration of digital and green skills into agricultural curricula (Sephokgole, 2025).
- limited post-training support for employment and entrepreneurial activity (Chakravorty et al., 2024).
- fragmented coordination across sectors and governance structures (Mende et al., 2025).

These systemic barriers limit the scale and sustainability of learnership outcomes, thereby constraining their broader impact across the continent.

2.17.6 Strengthening Learnership Alignment with Agenda 2063

To align more closely with the aspirations of Agenda 2063, targeted improvements are needed. Priority actions include:

- integrating digital agriculture, climate-smart practices, and innovation-oriented competencies across all agricultural qualifications (Sephokgole et al., 2023).
- strengthening public-private partnerships to improve training relevance, resources, and market linkages (Maltseva et al., 2025).
- expanding structured post-training support to facilitate employment and enterprise

development (Beber et al., 2025).

- enhancing regional collaboration and harmonising qualifications with continental frameworks such as the African Continental Qualifications Framework (ETF, 2020)
- improving monitoring and evaluation systems to track long-term impacts and inform programme refinement (ETF, 2021)

These measures would enable AgriSETA learnerships to support national development priorities more effectively while contributing more significantly to Agenda 2063's broader vision for a skilled, productive, and prosperous Africa.

2.18 CONSTRAINTS OF CURRENT LEARNERSHIPS IN PROMOTING ENTREPRENEURIAL SKILLS

Learnerships are designed to support entrepreneurial development by equipping trainees with practical skills, hands-on experience, and exposure to business practices. However, evidence shows that current AgriSETA learnerships face several constraints that limit their ability to cultivate sustainable entrepreneurial capabilities. These constraints arise from programme design, systemic weaknesses within the entrepreneurial ecosystem, and broader socio-economic conditions. Figure 2 summarises the key barriers identified across recent studies.

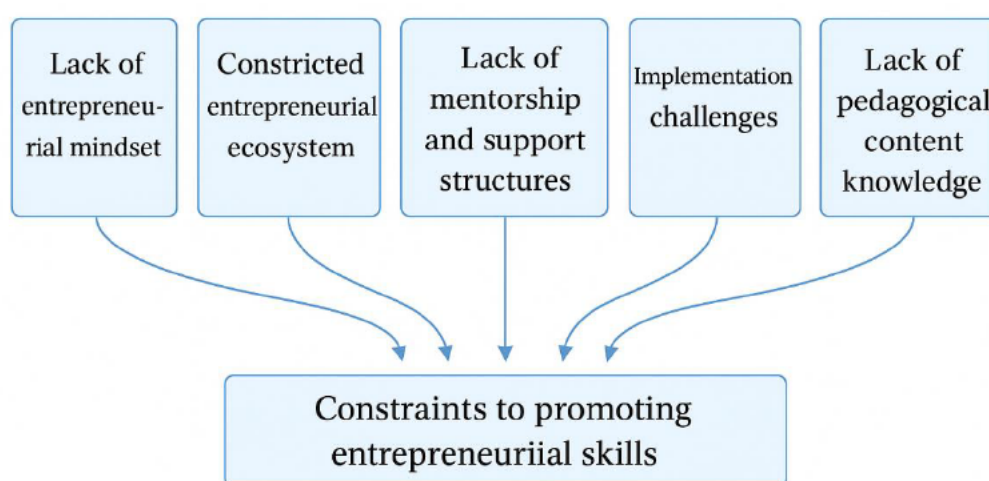


Figure 3: Constraints to promoting entrepreneurial skills

Source: Adapted from Matabane et al., 2022.

2.18.1 Lack of Entrepreneurial Mindset and Applied Competencies

A recurrent limitation is the insufficient focus on developing an entrepreneurial mindset. Research shows that while AgriSETA learnerships strengthen technical competencies, they seldom embed the behavioural attributes, opportunity-recognition skills, or risk literacy associated with entrepreneurial success (AgriSETA, 2024). Studies indicate that broader education systems do not consistently integrate entrepreneurial orientation or mindset training, which contributes to weak entrepreneurial readiness among trainees entering learnerships (Nchu et al., 2023). Perceptions of poor practical skills further weaken entrepreneurial confidence, reducing the likelihood that trainees will pursue self-employment after completing the programme (Mncwango et al., 2024).

2.18.2 Constricted Entrepreneurial Ecosystem

Entrepreneurial activity in South Africa operates within a highly constrained ecosystem characterised by high youth unemployment, limited formal-sector absorption, and persistent inequality. These contextual barriers undermine the transition from skills acquisition to viable business creation (Mncwango & Adanlawo, 2025). Evidence suggests that many small and medium enterprises lack the technological and entrepreneurial capacity needed for growth, limiting opportunities for learnership graduates to enter supportive networks or value chains (Mhlongo & Daya, 2023). The broader post-school system also remains geared towards producing job seekers rather than job creators, resulting in a systemic misalignment between learnership outputs and entrepreneurial pathways (Forcher-Mayr & Mahlke, 2020).

2.18.3 Weak Mentorship and Support Structures

Mentorship is a critical enabler of entrepreneurial capability, yet formal mentorship structures within AgriSETA programmes are inconsistent and unevenly implemented. Many rural areas lack experienced mentors, business advisors, and support organisations capable of guiding young entrepreneurs through start-up processes, market entry, and enterprise management (Khambule, 2024). Studies have highlighted that trainees often express interest in starting micro-agricultural enterprises; however, their ability to do so is often undermined by limited guidance and the absence of structured post-training support (Nade & Malamsha, 2021). The lack of mentoring not only restricts skills application but also exacerbates existing inequalities, particularly for women and young people in low-income areas.

2.18.4 Funding and Resource Constraints

Financial barriers continue to be a significant deterrent to entrepreneurial activity. Many trainees lack access to start-up capital, production inputs, or financial planning support, which limits their ability to convert their agricultural skills into income-generating ventures (Magadla et al., 2024). Empirical studies indicate that disadvantaged groups, particularly rural women and youth, are the least able to access funding for enterprise development, despite demonstrating a strong interest in entrepreneurship (Vorster & Thaba, 2025). The absence of needs assessments in some programmes further contributes to misalignment between training content and the financial realities of potential entrepreneurs (Ngcobo & Khumalo, 2022).

2.18.5 Implementation Challenges in Learnership Delivery

Learnerships are administratively intensive and require high levels of coordination between SETAs, employers, and training providers. However, systemic weaknesses in programme management frequently undermine delivery. Evidence shows that many SETAs struggle with consistent implementation, quality assurance, and learner support due to operational inefficiencies, procurement delays, and limited institutional capacity (Khunoethe & Reddy, 2023). These shortcomings reduce the effectiveness of workplace-based learning, weaken the quality of assessments, and create variability in trainee outcomes.

2.18.6 Insufficient Pedagogical Content Knowledge

A further constraint relates to pedagogical quality. Many providers lack sufficient pedagogical content knowledge to deliver training that supports higher-order skills such as innovation, problem-solving, and opportunity identification (Vimbelo & Bayaga, 2023). Outdated curricula, limited teaching resources, and inconsistent engagement with industry partners exacerbate this problem. When workplace learning is inadequately supervised or poorly integrated with classroom instruction, trainees struggle to develop the competencies required for entrepreneurial activity.

2.18.7 Limited Labour Market and Post-Training Absorption

Despite the proliferation of registered learnerships, uptake and utilisation remain inconsistent, and many programmes fail to lead to employment or the creation of enterprises. Some employers

and trainees report that learnership content does not align with actual workplace needs, resulting in graduates who are technically trained but not work-ready or enterprise-ready (O'Neil et al., 2023). Weak post-training pathways limit the conversion of skills into sustainable opportunities, reducing the long-term impact of learnerships on entrepreneurial development.

These constraints highlight why current AgriSETA learnerships frequently achieve technical upskilling but often fall short in promoting entrepreneurship. Without addressing systemic gaps in mindset development, ecosystem support, mentoring, resource access, programme quality, and post-training pathways, learnerships will continue to underperform in their contribution to entrepreneurial activity and rural economic transformation.

Although previous studies have identified constraints affecting the effectiveness of vocational learnership programmes, limited empirical research has examined how these constraints interact with the development of entrepreneurial competencies and behavioural outcomes among programme beneficiaries. Furthermore, few studies have employed explanatory mixed-methods designs to provide integrated evaluations of training effectiveness within specific institutional and regional contexts. This study addresses these gaps by combining quantitative and qualitative evidence to assess how participation in AgriSETA learnership programmes influences entrepreneurial growth in the Eastern Cape Province.

2.19 IMPACT OF LEARNERSHIPS IN FACILITATING ENTRY INTO THE COMMERCIALISATION SPACE

Learnerships, particularly those facilitated by AgriSETA, remain an important mechanism for enabling entry into the commercialisation space. These structured programmes combine theoretical learning with practical workplace experience, offering a dual pathway that addresses persistent skills shortages in the agricultural sector. Because commercialisation requires both technical competence and the ability to operate within competitive markets, learnerships play a catalytic role in preparing trainees for these demands.

Evidence suggests that effective learnerships can enhance employability and support entry into commercial activities. Botha et al. (2023) emphasise the need for holistic designs that account for the diverse needs of disadvantaged groups. Such inclusivity enhances innovation and adaptability, which are essential for navigating the complexities of commercial agricultural environments. Ncube & Matlala (2025) similarly note that well-implemented learnerships

improve training efficiency and workforce readiness by equipping participants with skills directly applicable to commercial operations.

Innovation intermediaries also support commercialisation outcomes. Caloffi et al. (2023) demonstrate that such intermediaries facilitate the overcoming of financial and operational barriers to eco-innovation by enhancing access to the resources necessary to bring innovations to market. Within the agricultural sector, this support strengthens the ability of learnership graduates to transition from training to entrepreneurship.

The dynamic nature of agriculture requires ongoing learning and adaptation. Scartozzi et al. (2025) demonstrate that interactions between social and commercial ventures can influence business entry rates, indicating that learnerships help trainees navigate hybrid spaces where profit goals must be balanced with community needs. This is particularly relevant in South Africa, where commercialisation often intersects with rural livelihoods and social development obligations.

Despite these strengths, several constraints limit the impact of learnerships on commercial participation. South Africa continues to experience high rates of early-stage entrepreneurial failure. Sonandi et al. (2021) attribute this pattern to weaknesses in operational capacity and Total Quality Management (TQM) practices within small enterprises. These systemic deficiencies shape the environment in which learnership graduates attempt to commercialise their ventures.

Gaps in entrepreneurial education further restrict the potential of learnerships. Ngcobo and Khumalo (2022) highlight limited exposure to social entrepreneurship principles, while Ncube and Matlala (2025) show that many learners prefer traditional employment due to low entrepreneurial confidence. Such attitudes constrain self-employment pathways and limit the entrepreneurial outcomes of learnerships.

Structural barriers also hinder commercial entry. Nkwinika and Akinrinde (2023) identify recurring constraints, including inadequate start-up finance, regulatory hurdles, and a lack of information about support mechanisms. Bureaucratic delays and corruption worsen these challenges for young people attempting to navigate government support systems. Without a functioning support ecosystem, the skills gained from learnerships seldom translate into sustained entrepreneurial activity.

Broader socio-economic realities further limit commercialisation prospects. Research shows that many young South Africans lack the financial capital, networks, and confidence required to establish new enterprises. Structural inequality, high unemployment, and persistent poverty reduce entrepreneurial participation and limit the long-term impact of learnerships. These patterns reinforce findings by Botha et al. (2023), who argue that current skills interventions do not fully meet the needs of marginalised groups.

Learnerships facilitated by AgriSETA, therefore, hold considerable potential for improving commercial participation by strengthening employability, building entrepreneurial competence, and enhancing innovation pathways. However, their overall impact remains uneven due to design limitations, structural barriers, and gaps in post-training support. Addressing these challenges is essential for positioning learnerships as a more effective driver of commercialisation and sustainable rural development.

The evidence suggests that learnerships offer a valuable foundation for developing technical capabilities in agriculture; however, structural constraints, weak entrepreneurial preparation, and limited post-training support hinder their ability to facilitate meaningful commercialisation. These dynamics underscore the need to examine the conceptual underpinnings of learnerships in greater depth, particularly how the learnership model is intended to operate within South Africa's skills ecosystem. The following section, therefore, clarifies the defining features of learnerships and the assumptions that guide their design, providing a basis for analysing their relevance to agricultural development.

2.20 COLLABORATION OF ENTREPRENEURSHIP, INNOVATION, AND DIGITALISATION CURRICULUM

The integration of entrepreneurship, innovation, and digitalisation within curriculum design is increasingly recognised as a strategic lever for strengthening entrepreneurial capability in South Africa. This alignment is crucial given persistent structural challenges, including high unemployment, uneven digital access, and the need for more adaptable economic systems. A coherent curriculum that integrates these elements supports entrepreneurial readiness by equipping trainees with digital literacy, innovative problem-solving skills, and the ability to develop sustainable business models in rapidly changing market environments (Ncube, 2025).

National policy frameworks emphasise entrepreneurship as a driver of job creation and inclusive

growth, yet the translation of these intentions into meaningful behavioural change remains inconsistent. Several initiatives aim to cultivate entrepreneurial mindsets, although their impact is often diluted by weak implementation and limited alignment across education and training systems (Ncube, 2025). Innovation hubs, incubators, and technology transfer platforms aim to address these gaps by providing access to mentors, digital tools, and networks; however, their reach remains uneven across sectors and provinces (Abrahams, 2020).

Within the learnership system, SETA-accredited institutions have begun embedding digital and innovation-related modules into business and technical programmes. For example, MICT SETA delivers digital marketing learnerships, and other providers integrate innovative content into programmes such as New Venture Creation and Business Administration (Mtotywa & Motaung, 2024). However, collaboration between these institutions and AgriSETA remains limited. This fragmentation restricts opportunities to embed digital skills, innovation management, and entrepreneurial capability into agricultural learnerships, despite clear evidence that such integration could support market access, farming innovation, and value-chain participation.

Digitalisation itself has reshaped the entrepreneurial landscape by reducing entry barriers, expanding market reach, and enabling more efficient business processes. Digital platforms, including mobile applications and e-commerce systems, facilitate data-driven decision-making and create new opportunities for venture growth (Camps et al., 2025). These tools strengthen the broader entrepreneurial ecosystem by promoting collaboration, information sharing, and the diffusion of innovation. However, the uneven adoption of digital technologies across agricultural training environments continues to limit the potential impact of such tools. Many trainees lack access to suitable devices, reliable internet connectivity, or the digital literacy necessary to utilise technology effectively.

Although most SETA-accredited providers have adopted online learning technologies, these tools are often used primarily for content delivery rather than for cultivating innovation or entrepreneurial capability. This reveals a broader systemic concern: digital tools are frequently implemented for administrative efficiency rather than as catalysts for creative problem-solving or enterprise development (Chiromo et al., 2023).

Entrepreneurship education remains a central pillar in preparing individuals to participate meaningfully in the digital economy. Well-designed entrepreneurial training enhances

confidence, opportunity recognition, and business intent (Letshaba et al., 2025). However, curricula must be continuously updated to keep pace with the rapid evolution of digital technologies and the demands of emerging markets. Failure to do so risks widening the gap between training outcomes and labour market expectations, particularly for trainees entering agriculture, where digital transitions are increasingly shaping production, marketing, and distribution systems (Nxumalo & Chauke, 2025).

Despite growing recognition of the need for collaboration between entrepreneurship, innovation, and digitalisation, implementation across learnerships remains fragmented. Strengthening this integration within AgriSETA programmes is essential for supporting commercialisation, enhancing competitiveness, and cultivating a workforce capable of contributing to a dynamic and inclusive agricultural economy.

Digital competencies are increasingly recognised as enabling factors for entrepreneurial participation, particularly in accessing market information, financial services, and supply networks. However, disparities in digital infrastructure and the integration of digital skills within vocational training curricula may limit the potential of learnership programmes to support digitally enabled entrepreneurship. The relevance of digitalisation in this study, therefore, lies in understanding how technological capabilities interact with training experiences to influence entrepreneurial growth outcomes.

2.21 THE ROLE OF ENTREPRENEURSHIP CURRICULUM IN ACCELERATING MARKET ABSORPTION OPPORTUNITIES

Entrepreneurship curriculum plays an increasingly important role in enabling market absorption opportunities in South Africa, where structural unemployment, constrained economic diversification, and limited labour market mobility restrict pathways for youth participation. Well-designed entrepreneurship education strengthens opportunity recognition, innovation capability, and readiness for self-employment, all of which are essential for participation in both formal and informal economies (Mncwango & Adanlawo, 2025). However, the extent to which these curricula translate into meaningful outcomes remains uneven, particularly within AgriSETA-accredited programmes.

Evidence consistently demonstrates that structured entrepreneurship education enhances entrepreneurial intention, confidence, and competency, forming the basis for identifying and

responding to market opportunities (Ncube & Matlala, 2025). Studies conducted in higher education settings show that variations in curriculum depth influence learners' entrepreneurial thinking and behavioural intention (Fan et al., 2024). Although these findings provide important insights, they highlight a notable gap: limited empirical work examines how entrepreneurship is integrated into learnerships, despite their explicit aim to strengthen employability and practical competence.

Entrepreneurial self-efficacy remains a significant determinant of entrepreneurial behaviour. Exposure to entrepreneurship curricula equips learners with the capabilities required across the venture creation lifecycle, strengthening their readiness for opportunity-driven activities (Otache, 2025). This is particularly relevant in South Africa, where rising unemployment necessitates alternative economic pathways and new forms of livelihood generation. The integration of entrepreneurship modules within AgriSETA learnerships, therefore, has the potential to support commercial participation. However, this potential is constrained by inconsistent curriculum delivery, limited contextual alignment, and weak pedagogical design.

International and local evidence underscore the importance of experiential learning approaches, including project-based learning, real-world problem-solving, and enterprise simulations (Chitamba et al., 2025). These pedagogies enhance practical competence, encourage independent thinking, and strengthen adaptive capacity. However, uniform teaching approaches across diverse learner groups risk reinforcing educational inequalities. Context-responsive learning environments remain essential to ensure that entrepreneurship education benefits trainees equitably across rural and urban settings (Ajani, 2024).

A further consideration is the level of ecosystem support provided. Institutions are increasingly serving as entrepreneurial support systems, offering mentorship, incubation, networking, and access to information. Research shows that such integrated support significantly increases the likelihood of venture creation and improves employment outcomes (Mgweba & Lungisa, 2024). However, these institutional functions remain underdeveloped in agricultural training contexts, limiting the commercialisation prospects of learnership graduates.

Digitalisation and global orientation further expand the scope of market absorption. Integrating digital entrepreneurship, e-commerce strategies, and global market insights enhances entrepreneurial competitiveness and facilitates participation in emerging economic opportunities

(Camps et al., 2025). For AgriSETA learners, digital tools can bridge market gaps and broaden access to value chains, although persistent digital divides limit this potential.

The entrepreneurship curriculum holds considerable potential to accelerate market absorption opportunities, but only when it is contextually aligned, pedagogically robust, and supported by well-functioning institutional ecosystems. Without these conditions, entrepreneurship education risks remaining aspirational rather than transformative for learners positioned at the margins of economic participation.

2.22 ENVIRONMENT FOR EFFECTIVE ENTREPRENEURSHIP EDUCATION

There is increasing convergence in the literature on the features of an environment that enable effective entrepreneurship education. Shao et al. (2024) observe a shift away from a narrow focus on start-up mechanics towards an approach that emphasises mindset, behaviour and adaptive orientation. However, meeting this aspiration requires several foundational conditions that determine whether entrepreneurship education can yield meaningful outcomes (Lekutle, 2023). One condition is the recognition that not all learners will become competent entrepreneurs. While Maka (2023) supports widening access, they argue that learners who demonstrate strong entrepreneurial potential should receive more deliberate support as future “employment creators”. Jiatong et al. (2021) reinforce this view, noting that entrepreneurial success is more likely when individuals possess the appropriate dispositions and attitudes from the outset.

A conducive environment also requires alignment with entrepreneurial framework conditions, such as those embedded in the Global Entrepreneurship Monitor model. Gomes et al. (2023) argue that embedding training on new venture creation and business development across all educational levels strengthens the overall prevalence of entrepreneurial activity. This requires learning spaces where individuals can develop entrepreneurial skills, understand business fundamentals, and engage in practical, authentic tasks that reflect real economic contexts (Ilonen, 2021).

Cultural and contextual relevance is another core requirement. Bell and Bell (2020) caution against adopting international entrepreneurship education models without regard for local realities, while Tengan et al. (2020) emphasise that uncritical importing of concepts may undermine learning outcomes. Effective entrepreneurship education must therefore be grounded

in local social, economic and ideological contexts to ensure applicability and resonance.

An enabling environment is thus more than the availability of training programmes. It requires approaches that encourage creativity, disruption and long-term developmental thinking (Bell & Bell, 2020). Wang and Zhang (2025) note that such environments must resemble fertile entrepreneurial ecosystems, capable of unlocking entrepreneurial capabilities and supporting sustained personal and economic development.

2.23 CONCEPTUALISING ENTREPRENEURIAL GROWTH

Conceptualising entrepreneurial growth in South Africa requires an understanding of the socio-economic conditions that shape entrepreneurial behaviour and outcomes. The country's transition economy, characterised by persistent unemployment and unequal access to opportunities, continues to shape how individuals participate in entrepreneurial activity. As a result, government efforts to promote entrepreneurship among historically disadvantaged groups remain central to national strategies aimed at inclusive growth and job creation (Mxunyelwa & Dinesh, 2025).

Small, medium and micro enterprises are consistently identified as key drivers of employment creation, economic diversification and local development (Westhuizen, 2024). Despite their strategic importance, sustainability remains a significant challenge, with many enterprises failing within their early years. Research attributes these failures to limited business management skills, inadequate financial resources and insufficient market intelligence (Moni & Chipunza, 2021). Developing core business competencies is therefore essential, as these capabilities directly influence operational efficiency, strategic decision-making and long-term viability (Saah & Musvoto, 2020).

The cultural context further shapes entrepreneurial trajectories. South African studies highlight the prevalence of a survivalist orientation among some entrepreneurs, which tends to constrain innovation, growth and competitiveness. In contrast, migrant entrepreneurs often demonstrate stronger entrepreneurial orientation, adaptability and opportunity-driven behaviour (Gavaza & Stofile, 2025). This contrast highlights the need for targeted interventions that enhance entrepreneurial confidence, opportunity recognition, and proactive behaviour among local entrepreneurs (Bogie, 2023).

Collaboration and networking are additional enablers of entrepreneurial growth. Effective collaboration within and across enterprises enhances resource sharing, supports knowledge exchange and promotes innovation (Nalmpanti et al., 2024). At the same time, the adoption of technology, including mobile-based platforms, has become increasingly important for improving operational efficiency, expanding market reach and strengthening customer engagement in digitally evolving sectors.

Taken together, these factors suggest that entrepreneurial growth in South Africa is contingent upon both individual capabilities and broader ecosystem conditions. Cultural orientation, institutional support, financial access, technological integration and collaborative networks collectively shape the extent to which entrepreneurial activity can flourish. Strengthening these elements is therefore essential for building a resilient entrepreneurial foundation that can make a meaningful contribution to economic and social development.

2.24 RESEARCH GAPS

Identifying research gaps is crucial for enhancing agricultural education and training systems in South Africa, where structural, pedagogical, and economic constraints persistently hinder sectoral performance. Research gaps highlight areas where existing evidence is insufficient to address critical challenges, thereby guiding both academic inquiry and policy reform.

Although progress has been made in developing agricultural skills, significant issues remain underexplored. The Academy of Science of South Africa's Consensus Study highlights persistent fragmentation across institutions, weak coordination among stakeholders, and curricula that do not adequately address emerging agricultural challenges (Schneider et al., 2024). These limitations suggest that the current evidence base is insufficient to support a transformative AET system.

In the South African context, three significant gaps stand out: the alignment between AET and national development priorities, the sustainability of training programmes, and the inclusion of marginalised groups. These issues reflect broader systemic weaknesses such as poor governance, inconsistent funding and limited monitoring and evaluation capacity. Addressing these gaps is vital for achieving national goals, such as the National Development Plan's target of creating one million agricultural jobs by 2030, which requires more unmistakable evidence on whether current training outputs meet labour market needs (Qwabe & Khapayi, 2025).

A further gap concerns the localisation of global best practice. While international models offer valuable insights, little work has examined how these models should be adapted to South Africa's socio-economic and institutional realities. Without such contextualisation, interventions risk being misaligned, unsustainable or ineffective.

Addressing these gaps is therefore central to enhancing the contribution of agricultural education and training to economic growth, social equity and rural development, and to ensuring that AET remains responsive to evolving national and global priorities.

2.24.1 Critical Gaps in Current Literature on AgriSETA Learnerships

AgriSETA learnerships aim to address agricultural skills shortages and promote employment, yet significant gaps remain in the literature concerning their design, implementation, and long-term impact. These gaps limit the effectiveness of learnerships and constrain their developmental potential (Rabie & Cornelissen, 2023).

2.24.1.1 Employment Outcomes and Workforce Integration

Evidence on post-training employment outcomes remains mixed. Ndashe and Omotosho (2024) report that only 56.1% of graduates from the Owen Sitole College of Agriculture secured employment, highlighting a possible misalignment between programme outputs and industry needs. Research is required on how learnerships can strengthen transitions into employment, including apprenticeships, internships and enterprise development pathways.

2.24.1.2 Inclusivity and Access for Marginalised Groups

Persistent access disparities limit the reach of AgriSETA programmes. Many offerings remain urban-centred, creating barriers for rural trainees. Gendered norms further constrain the participation of women, despite their significant involvement in agriculture. While the need for equitable access is acknowledged (Korkie et al., 2025), models for operationalising inclusivity remain underdeveloped.

2.24.1.3 Practical Training and Curriculum Design

Graduates often report inadequate practical experience, which undermines their readiness for the workplace environment. Choo et al. (2024) note that programme durations are often too short to

cover essential competencies. Research is needed to determine the optimal lengths of training, effective pedagogical strategies, and effective mechanisms for embedding authentic workplace learning.

2.24.1.4 Monitoring and Evaluation Frameworks

Monitoring and evaluation remain weak across many AgriSETA programmes. Without reliable data on learner progress, employer satisfaction, or graduate outcomes, it is challenging to assess the effectiveness of the programme. Although Rabie and Cornelissen (2023) call for improved monitoring and evaluation (M&E), there is a lack of work on identifying the indicators and tools that would provide meaningful insights.

2.24.1.5 Sustainability and Long-Term Impact

Concerns persist regarding the sustainability of AgriSETA programmes, including inconsistent funding and limited post-training support. Emerging areas such as green skills and climate-resilient farming are often absent from curricula. While O’Neil et al. (2023) highlight the importance of adaptation and succession planning, practical guidance for embedding sustainability within learnerships remains limited.

2.24.2 Future Directions for Vocational Training Research

The future trajectory of vocational training research presents opportunities to transform agricultural practices and strengthen education systems. As countries increasingly recognise the strategic value of vocational education, targeted research is required to ensure ongoing relevance and responsiveness (Marinič, 2023).

2.24.2.1 Integration of Digital Tools and Learning Platforms

Digital platforms offer flexible and scalable opportunities for learning. Research should explore the effectiveness of mobile technologies, virtual simulations and extended reality tools in agricultural training, particularly for remote and resource-constrained communities (Shravani et al., 2025).

2.24.2.2 Sustainable and Green Vocational Training

Given environmental pressures, vocational curricula must incorporate green skills such as climate-smart agriculture, resource-efficient production and agroforestry. Further research is required to determine how these competencies can be meaningfully integrated (Handayani et al., 2020).

2.24.2.3 Impact of Soft Skills on Vocational Success

Soft skills are increasingly recognised as central to workplace readiness. Research should examine how communication, collaboration and problem-solving can be effectively taught, assessed and linked to long-term career outcomes (Hussein, 2024).

2.24.2.4 Collaboration Between Public and Private Sectors

Research is needed to identify models of effective public-private collaboration, particularly in the agri-tech sector. Understanding how industry participation enhances curriculum relevance and workplace integration is essential for improving outcomes.

2.24.2.5 Cross-Cultural and Global Approaches to Vocational Education

There is limited analysis of how cultural norms influence training outcomes. Comparative studies can help identify which approaches are transferable across contexts and where local adaptation is necessary (Li, 2023).

2.24.2.6 Monitoring and Evaluation of Vocational Training Outcomes

Future work should prioritise comprehensive monitoring and evaluation (M&E) frameworks capable of tracking both short- and long-term outcomes. Emerging analytical tools, including big data and machine learning, offer potential for more accurate assessments of system performance.

2.25 CHAPTER SUMMARY

This chapter examines the macro, meso, and micro contexts that shape the design, relevance, and performance of learnerships in South Africa, with particular emphasis on AgriSETA programmes. It highlighted how national development agendas, including the Sustainable Development Goals, the National Development Plan and Agenda 2063, establish clear expectations for skills

development as a mechanism for fostering employment, inclusivity and economic transformation. At the meso level, legislative and regulatory frameworks, such as the Skills Development Act and the Higher Education Act, along with associated quality assurance systems, provide the institutional architecture within which learnerships operate. Their effectiveness, however, depends on consistent implementation, adequate governance and meaningful employer participation.

Micro-level analysis clarified the practical factors that influence learner experience and performance, including pedagogy, digital readiness, mentorship, assessment quality and the overall learning environment. Across these levels, the chapter identified persistent gaps in curriculum alignment, monitoring systems, stakeholder coordination and post-training support, which collectively weaken the capacity of learnerships to deliver sustained outcomes.

The chapter also explored the role of entrepreneurship education, entrepreneurial learning and digital innovation in strengthening pathways to commercialisation, noting that these dimensions remain unevenly embedded within agricultural training. Finally, the synthesis of existing literature revealed critical gaps, particularly concerning employment outcomes, inclusivity, practical training, sustainability and long-term impact.

These insights establish the conceptual and contextual foundation for the next chapter, which presents the theoretical frameworks underpinning this study. The transition from contextual analysis to theoretical positioning is essential for clarifying how the study interprets capability, opportunity and support within learnership pathways and how these constructs guide subsequent methodological choices.

CHAPTER 3: THEORETICAL FRAMEWORK

3.1 INTRODUCTION TO THE THEORETICAL FRAMEWORK

This chapter presents the theoretical foundations for analysing the effectiveness of AgriSETA learnership programmes in promoting entrepreneurial growth. The study adopts an integrated theoretical framework drawing on four complementary perspectives: institutional theory, the functional theory of value, the resource-based view (RBV), and the theory of user acceptance. These theories were selected based on their relevance to explaining how vocational training interventions operate within complex socio-economic environments and how learning outcomes translate into entrepreneurial behaviour and economic participation.

Institutional theory provides a macro-level lens for understanding how formal regulations, organisational structures, policy incentives and socio-cultural norms influence the design, implementation and outcomes of learnership programmes. Within the South African skills development system, institutional arrangements shape access to training opportunities, quality of programme delivery and the availability of post-training support mechanisms. This perspective enables the study to examine how systemic constraints and enabling conditions affect the capacity of learnerships to facilitate entrepreneurial progression.

The functional theory of value contributes to economic and social perspectives by clarifying how participation in entrepreneurial activities generates both material and nonmaterial outcomes. In the context of vocational training, the perceived usefulness of skills acquisition influences learners' motivation to apply knowledge in productive activities. This theory, therefore, supports an assessment of how learnership participation contributes to income generation, livelihood improvement and broader socio-economic development outcomes.

The resource-based view focuses on the development of internal capabilities required for sustained entrepreneurial participation. It emphasises the importance of technical competence, managerial skills, innovation capacity and access to productive resources in achieving competitive advantage. Applying this perspective enables the study to evaluate whether AgriSETA learnerships build transferable competencies and strategic capabilities that support entry into agricultural markets and long-term enterprise sustainability.

User acceptance theory introduces behavioural and technological dimensions by explaining the

factors that influence the adoption and utilisation of digital tools in training and entrepreneurial practice. As agricultural entrepreneurship increasingly depends on digital platforms for information access, financial transactions and market engagement, understanding trainees' perceptions of technological usefulness and ease of use becomes essential. This theoretical lens, therefore, assists in analysing how digital readiness and facilitating conditions shape entrepreneurial outcomes following programme participation.

Together, these theoretical perspectives provide a multidimensional analytical framework that links institutional context, learning value, capability development and behavioural adoption processes. The integration of these theories enables a comprehensive assessment of learnership effectiveness by examining how system-level conditions interact with individual competencies and resource access to influence entrepreneurial growth outcomes. The following sections elaborate on each theoretical perspective and develop an integrated conceptual framework for the study.

3.2 INSTITUTIONAL THEORY: HISTORICAL PERSPECTIVE

Institutional theory draws from early economic, sociological, and political traditions. While its intellectual origins can be traced to Veblen's critique of economic behaviour, systematic scholarly attention to institutions and organisations only emerged in the mid-twentieth century. Merton's work on bureaucracy and conformity highlighted how formal structures shape behaviour, while Selznick advanced these ideas by distinguishing between structural systems and adaptive systems. Selznick's conceptualisation of institutionalisation as the point where organisational processes become value-laden and taken for granted laid the foundation for later work on organisational legitimacy (Jepperson & Meyer, 2021).

Institutional theory argues that organisations operate within broader normative structures that define appropriate behaviour and confer legitimacy (Sarta et al., 2021). Organisations exposed to different institutional environments adopt distinct strategies to secure legitimacy, meet expectations, or access resources. This logic explains the rapid growth of institutional theory within international business and entrepreneurship research, where it helps explain cross-cultural differences, entry strategies, and national-level constraints on organisational behaviour (Da Silva et al., 2024; Böschén et al., 2024; Galleli & Amaral, 2025).

The emergence of neo-institutional theory expanded the field by emphasising how shared cultural

norms and cognitive models shape organisational behaviour (Rabie, Cornelissen, & 2023). In entrepreneurship, three dominant streams now characterise institutional research (Gonçalves & Silva, 2021): the influence of institutional environments on entrepreneurial activity (Odei, 2024), the pursuit of organisational legitimacy (Bui et al., 2023), and institutional entrepreneurship, where actors actively reshape institutional arrangements (Hoogstraaten et al., 2020).

Given its focus on rules, norms, and expectations, institutional theory provides a suitable foundation for analysing South African SETA learnerships. This study aligns most closely with the first stream, which examines how institutional environments shape entrepreneurial activity and skills development.

3.2.1 Constructs of Institutional Theory

Institutional theory offers a valuable lens for understanding how policy, governance, and socio-cultural norms influence the design and implementation of learnerships (O’Neil et al., 2023). Institutions shape behaviour by enabling or constraining actions and influencing developmental outcomes (Burch & Crowson, 2020). These influences arise not only from formal policy frameworks but also from informal norms, traditions, and shared belief systems (Ordonez & Ponce, 2021; Silva et al., 2024).

Three core institutional dimensions typically frame this analysis (Wagner et al., 2022):

- **Regulatory dimension**

This dimension refers to formal rules, regulations, and enforcement mechanisms that shape organisational behaviour (Gang, 2020; Miörner, 2020). In learnerships, these include the Skills Development Act, SAQA regulations, AgriSETA accreditation requirements, and compliance demands for employers and training providers.

- **Normative dimension**

These elements comprise values, professional standards, and role expectations that guide behaviour through social approval. In agricultural learnerships, they include workplace standards, occupational norms, and societal perceptions of youth involvement in agriculture (Ordonez & Ponce, 2021).

- **Cognitive dimension**

This dimension captures the belief systems and shared mental models that individuals rely on when interpreting their environments (Burch & Crowson, 2020). It explains why decision-makers follow familiar routines even when better alternatives exist.

These dimensions are central to analysing AgriSETA learnerships because they reveal how institutional rules, social expectations, and cognitive patterns influence programme implementation. Institutional frameworks such as CAADP illustrate how broader policy agendas shape coordinated action (Mbiakop, 2023). Stakeholder involvement in learnerships, as emphasised by O'Neil et al. (2023), demonstrates the extent to which institutional environments determine programme quality and relevance.

3.2.2 Application of Institutional Theory to Learnerships

Institutional theory helps explain how AgriSETA learnerships are governed, structured, and legitimised within South Africa's skills development system. As a SETA, AgriSETA operates under regulatory pressures from national policy, accreditation bodies, and societal expectations to address skills shortages and promote inclusive development (O'Neil et al., 2022; Botha et al., 2023).

Programme design reflects coercive pressures arising from legislation, accreditation rules, and reporting obligations (Elgar et al., 2022). Normative pressures stem from professional standards and expectations within agricultural training. Cognitive pressures reflect long-standing assumptions about agricultural education. Together, these pressures drive isomorphism, leading organisations to adopt similar practices to maintain legitimacy (Karbhari et al., 2020).

Stakeholder dynamics further illustrate institutional influence. Employers, trainees, providers, and government agencies contribute to shaping programme expectations and assessing legitimacy (Aksom & Vakulenko, 2023). This supports the argument that learnerships are institutional products shaped by governance arrangements rather than merely technical training interventions.

For this study, institutional theory offers a structured lens for examining how policy, norms, and expectations influence the implementation and outcomes of AgriSETA learnerships, particularly their capacity to support entrepreneurial growth in the Eastern Cape Province.

3.3 THE FUNCTIONAL THEORY OF VALUE

The Functional Theory of Value explains how individuals derive meaning, utility, and motivation from learning experiences. Initially advanced by Sheth, Newman, and Gross, the theory identifies four value dimensions that influence decision-making and engagement. In this study, the theory helps explain how AgriSETA learnerships generate value that supports entrepreneurial capability and labour market participation.

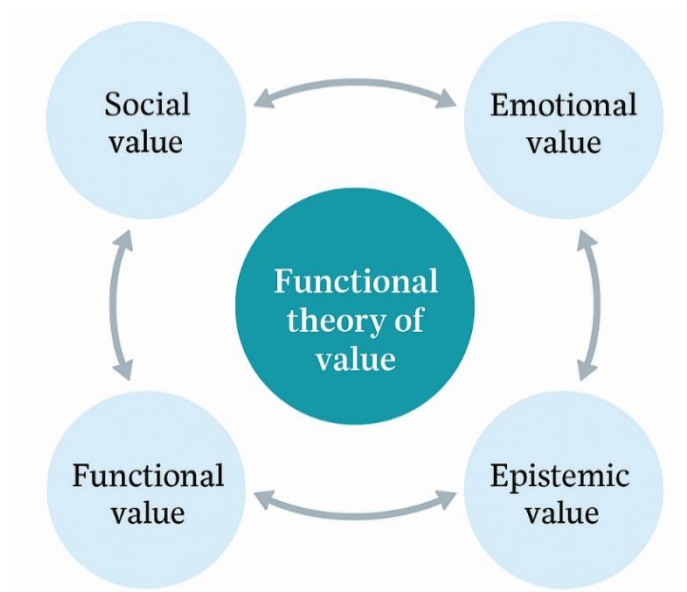


Figure 4: Functional Theory of Value

Source: Rizkalla & Setiadi (2020).

3.3.1 Functional Value

Functional value refers to the practical benefits that a service or intervention delivers. It captures the utility derived from performance and problem-solving capacity. In vocational settings, it aligns with rational assessments of whether training improves skills, employability, and workplace readiness (Taherdoost & Madanchian, 2023).

3.3.2 Social Value

Social value refers to the benefits derived from belonging, reputation, and social approval. Choices are shaped not only by individual preference but also by collective norms and expectations (Namazova, 2025). Emotional responses, including pride or shame, often accompany these decisions and influence perceptions of quality of life (Rasoolimanesh et al., 2020).

3.3.3 Emotional Value

Emotional value reflects the feelings associated with an experience. Positive emotions strengthen engagement and perceived worth, whereas negative emotions deter participation (Antoci, 2021; Tabrizi et al., 2024). Emotions also signal what individuals consider important and guide judgment in educational and workplace environments (Engelsen, 2022).

3.3.4 Conditional Value

Conditional value concerns the influence of situational factors on perceived worth. Crisis, opportunity, timing, or personal need all shape how individuals evaluate the usefulness of a programme (Loxton et al., 2020). This dimension underscores the importance of context-sensitive design in vocational training (Alolabi et al., 2021).

3.3.5 Applying the Functional Theory of Value to AgriSETA Learnerships

The Functional Theory of Value offers a valuable lens for understanding how trainees perceive the relevance and benefits of AgriSETA learnerships. Trainee decisions are shaped by functional considerations, such as employability, income potential, and improved competence; social motivations linked to community expectations and status; emotional responses, including confidence or anxiety; and situational needs influenced by rural realities, climate pressures, and market volatility (Gamage et al., 2021).

Values also evolve as trainees gain exposure to new knowledge, technologies, and workplace environments. Programmes that recognise these shifts can better align training content with learner aspirations and strengthen support for entrepreneurial development (Sharma & Kushwah, 2025).

Values are closely connected to identity formation. Trainees who aspire to self-reliance, social mobility, or community contribution engage with learnerships differently from those seeking wage employment alone (Mtotywa & Motaung, 2024). Designing programmes that respond to these motivations can improve completion rates, learning quality, and entrepreneurial intent.

3.3.6 Value Outcomes in Learnership Programmes

The Functional Theory of Value helps explain how learnerships generate direct and indirect

benefits for trainees, employers, and communities.

3.3.6.1 Functional Outcomes

Learnerships deliver recognised qualifications, improve workplace readiness, and develop industry-specific competencies. They also strengthen organisational efficiency by supplying trained candidates who require limited orientation. These outcomes align with national development priorities relating to employability and inclusive economic growth (DHET, 2023).

3.3.6.2 Tangible Value

Tangible benefits include occupational competence, NQF qualifications, increased employability, and improved prospects for enterprise development. Employers benefit from tax incentives, BBBEE advantages, and an expanded skills pipeline (O’Neil et al., 2023).

3.3.6.3 Intangible Value

Intangible gains include confidence, professional identity, social inclusion, and access to networks. For marginalised groups, learnerships offer a pathway into formal labour markets, enhancing empowerment and social mobility. At the community level, they address rural skills shortages and support local economic revitalisation (Matha & Jahed, 2024).

3.3.6.4 Barriers to Realising Full Value

Several constraints limit the potential value of learnerships. Weak alignment between curricula and labour-market needs leads to skills mismatches. Rural trainees face challenges related to transportation, digital access, and financial barriers. Fragmented coordination between SETAs, providers, and employers undermines programme delivery and monitoring (O’Neil et al., 2023). Strengthening partnerships, refining curricula, and improving evaluation systems will be necessary to fully realise programme value.

The Functional Theory of Value provides a multi-dimensional framework for analysing AgriSETA learnerships. It clarifies how functional, social, emotional, and conditional values influence trainee engagement, programme relevance, and post-training outcomes. Understanding these value dynamics strengthens the interpretation of how learnerships support entrepreneurial growth in the agricultural sector.

3.4 RESOURCE-BASED THEORY

The Resource-Based View (RBV) is the third theoretical anchor supporting this study. RBV argues that organisations achieve sustainable competitive advantage when they possess and deploy resources that competing firms cannot easily acquire or imitate (D’Oria et al., 2021). The theory emphasises that internal resources differ in value, and only those meeting specific criteria can contribute meaningfully to long-term advantage. These resources must be valuable, rare, inimitable, and non-substitutable, collectively known as the VRIN conditions (Kumar & Rodrigues, 2020).

RBV categorises organisational resources into physical, human, and organisational capital (Kumar & Rodrigues, 2020; Chand & Tarei, 2021). Tangible resources, such as land, equipment, and financial capital, support operational efficiency. However, intangible resources, including skills, knowledge, reputation, culture, and intellectual capital, often offer greater strategic value because they are harder for competitors to replicate (Gerhart & Feng, 2021; Jennifer, 2023).

In the agricultural sector, RBV is particularly relevant as enterprises increasingly invest in technology, innovation systems, and workforce development to sustain competitiveness. The strategic use of skilled labour, modern production systems, and context-specific knowledge can generate unique advantages that are difficult to imitate (Sony & Aithal, 2020; Hidayat & Widodo, 2022). Knowledge management capabilities reinforce RBV by highlighting how firms transform resources into strategic outcomes through learning, adaptation, and innovation (Lavrenenko et al., 2021; Utami & Alamanos, 2023).

RBV also accommodates the idea that seemingly ordinary resources may become strategic when embedded within an effective business model (Fréry et al., 2020). The growing stakeholder perspective within RBV further broadens its application, recognising that value creation depends on managing relationships with communities, employees, suppliers, and regulators (Freeman et al., 2021). These relationships contribute to reputational capital, an increasingly crucial intangible resource in contemporary enterprise environments.

3.4.1 Application of Resource-Based Theory

Applying RBV to learnerships supports an understanding of how organisations mobilise internal resources to create effective training systems. When a firm possesses competencies,

knowledgeable employees, and supportive organisational cultures, these resources can enhance learnership delivery and outcomes. Learnerships that draw on strong internal capabilities are more likely to produce graduates with relevant skills and enhance organisational productivity (O’Neil et al., 2023).

From an RBV perspective, well-designed learnerships become strategic assets. They develop valuable competencies such as communication, initiative, digital literacy, and problem-solving, which improve both employability and organisational capacity. Programmes grounded in RBV also align training content with existing organisational strengths, allowing firms to refine distinctive capabilities and build a workforce that contributes to sustained performance (Zvarimwa & Zimuto, 2022).

A stakeholder-oriented interpretation of RBV emphasises the importance of aligning learnerships with the aspirations of trainees and the needs of industry partners. This focus supports stronger engagement, higher completion rates, and better post-training absorption (McGahan, 2021). The theory also encourages innovation in training practices, including the use of digital tools and modern pedagogies that enhance learning quality and support continuous professional development (Jennifer, 2023)

3.4.2 Integration of Resource-Based Theory and Vocational Education

Integrating RBV into vocational education enhances the strategic contribution of training programmes to sectoral development. RBV emphasises that human capital is a critical organisational resource, and the development of rare and valuable skills can significantly improve competitiveness within sectors such as agriculture (Gerhart & Feng, 2021). Vocational education aligned with RBV, therefore, prioritises advanced, industry-specific competencies that are scarce in the labour market.

3.4.2.1 Resource-Based Theory in Vocational Education

Vocational programmes grounded in RBV focus on developing human capital that competitors cannot easily replicate. In agriculture, this includes specialised knowledge in sustainable production, climate-resilient farming, resource optimisation, and modern agri-technology. Training that cultivates these competencies creates a labour force that adds strategic value and reinforces organisational innovation (Sahoo et al., 2025).

3.4.2.2 Strategic Alignment with Sector Needs

Effective integration of RBV requires vocational programmes to be designed with a clear understanding of the agricultural sector's evolving needs. The sector increasingly depends on workers with technical proficiency in digital systems, precision agriculture, supply chain management, and environmental stewardship. When training produces graduates with these VRIN attributes, agricultural enterprises gain operational advantages that support resilience, productivity, and long-term competitiveness (Nagano, 2020).

RBV strengthens the case for structured vocational education as a driver of economic development. By producing a skilled and innovative workforce, vocational programmes enhance sectoral performance and contribute to national priorities such as rural development, employment creation, and sustainable growth.

3.5 UNIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY

The Unified Theory of Acceptance and Use of Technology (UTAUT) was developed by Venkatesh et al. (2003) to explain individuals' behavioural intention to adopt and use new technologies. The model synthesises constructs from earlier technology acceptance frameworks and identifies four primary determinants of technology use behaviour: performance expectancy, effort expectancy, social influence, and facilitating conditions. These constructs influence both behavioural intention and actual technology utilisation. Subsequent refinements of the model confirmed its applicability across organisational and non-organisational contexts, including education, consumer behaviour, and innovation adoption environments (Venkatesh et al., 2012; Thong & Xu, 2016; Xue et al., 2024).

Within vocational education and entrepreneurship development, UTAUT provides a behavioural lens for understanding how trainees engage with digital tools, innovation processes, and technology-enabled production systems. Contemporary agricultural enterprises increasingly rely on digital platforms for market access, precision farming technologies to enhance productivity, and information systems for decision-making. Consequently, technology acceptance represents a critical mechanism through which vocational competencies translate into entrepreneurial capability and economic participation (Dwivedi et al., 2019; Triandini et al., 2023).

Performance expectancy refers to the extent to which individuals believe that technology

adoption will improve productivity or entrepreneurial outcomes. In the context of AgriSETA learnerships, this construct relates to trainees' perceptions that digital agricultural tools, climate-smart technologies, and online market platforms can enhance enterprise viability and competitiveness. Effort expectancy concerns perceived ease of technology use, which is particularly relevant in rural training environments where exposure to advanced technologies may be uneven. Social influence reflects the role of facilitators, host employers, institutional actors, and peer networks in shaping attitudes toward innovation adoption. Facilitating conditions refer to the availability of infrastructure, training support, connectivity, and organisational resources that enable effective technology utilisation (Venkatesh et al., 2003; Dwivedi et al., 2019; Triandini et al., 2023).

These constructs align directly with the study's examination of curriculum responsiveness, digital competency development, and structural constraints influencing entrepreneurial progression. Empirical measures of digital skills acquisition, training quality, collaboration, and innovation orientation in the quantitative phase provide indicators of trainees' technology readiness. The qualitative phase further explores how institutional support systems, workplace exposure, and contextual resource limitations influence the practical adoption of technology within agricultural enterprise settings. This integration reflects the study's explanatory sequential mixed-methods logic, in which behavioural patterns identified through statistical analysis are interpreted in the context of stakeholder perspectives.

UTAUT complements the broader theoretical framework by providing a micro-behavioural explanation of how competency development interacts with enabling environments. While Institutional Theory explains how regulatory frameworks and organisational norms shape programme implementation, and the Resource-Based View highlights the importance of access to productive assets, UTAUT clarifies how individual perceptions and behavioural intentions mediate the translation of training inputs into entrepreneurial action. This theoretical positioning strengthens the analytical coherence of the study by linking digital capability formation to observable post-training outcomes such as enterprise initiation, employment absorption, and sustainability of economic participation.

The relevance of technology acceptance behaviour is further underscored by the increasing integration of digital learning platforms, blended training modalities, and innovation-driven agricultural practices within vocational education systems. Research indicates that exposure to

technology-enhanced learning environments can influence entrepreneurial intention and innovation adoption, particularly among youth participants in skills development programmes (Puriwat & Tripopsakul, 2021). Similarly, emerging evidence suggests that the diffusion of artificial intelligence and data-driven tools is reshaping knowledge acquisition processes and decision-making in entrepreneurial contexts, thereby reinforcing the importance of behavioural readiness for technology adoption (Duong et al., 2024).

Moreover, variation in facilitating conditions, such as limited infrastructure, inadequate mentorship, or weak post-training support, may constrain the extent to which trainees convert technological competencies into sustainable enterprise activity. Studies in vocational and higher education contexts demonstrate that institutional support and resource availability significantly influence technology adoption outcomes, even where individuals possess favourable attitudes toward innovation (Handoko, 2020; Granić, 2024). These insights are particularly relevant for evaluating learnership effectiveness in resource-constrained environments such as the Eastern Cape Province.

In this study, UTAUT is therefore applied as part of an integrated analytical lens rather than as a standalone predictive model. Its inclusion enables a deeper understanding of how behavioural intention, digital readiness, and contextual enabling conditions interact with institutional structures, perceived programme value, and resource availability to shape entrepreneurial outcomes. This integrated perspective supports a comprehensive evaluation of AgriSETA learnership effectiveness and helps explain why competency gains do not always translate into sustained entrepreneurial progression within vocational training systems.

3.6 INTEGRATED CONCEPTUAL FRAMEWORK

This study adopts an integrated conceptual framework to explain how participation in AgriSETA learnership programmes influences entrepreneurial growth outcomes among beneficiaries. The framework synthesises institutional theory, the functional theory of value, the resource-based view (RBV), and the Unified Theory of Acceptance and Use of Technology (UTAUT) in order to provide a multidimensional explanation of learnership effectiveness. These theoretical perspectives operate at different analytical levels but are conceptually interconnected in shaping entrepreneurial behaviour and economic participation (Xue et al., 2024).

At the macro and meso levels, institutional theory explains how policy frameworks, governance

arrangements, training coordination mechanisms, and broader socio-economic conditions influence the accessibility and quality of learnership programmes. Institutional constraints such as fragmented implementation structures, uneven training-provider capacity, and limited post-programme support can limit the extent to which beneficiaries translate acquired competencies into sustainable entrepreneurial activity (Kolho, 2024). Conversely, enabling institutional environments characterised by effective coordination, infrastructure support, and inclusive policy interventions can strengthen entrepreneurial transition pathways, particularly within rural agricultural economies.

Participation in learnership programmes is expected to shape beneficiaries' perceptions of the value of training. Drawing on the functional theory of value, the framework proposes that entrepreneurial action is influenced by the perceived usefulness of skills acquisition in improving income prospects, livelihood security, and socio-economic mobility (Ferdousi et al., 2025). When training is seen as relevant to local economic opportunities and responsive to sectoral needs, beneficiaries are more likely to apply the knowledge they acquire to productive activities. Perceived value, therefore, operates as a motivational mechanism linking programme participation to behavioural intention.

The resource-based view provides a capability-oriented explanation of entrepreneurial growth by emphasising the importance of internal competencies and access to productive resources in achieving competitive advantage (Day et al., 2025). Learnership participation is expected to enhance technical agricultural skills, business management capacity, an innovation orientation, and the recognition of opportunities. However, the translation of competencies into viable enterprise outcomes depends on beneficiaries' ability to mobilise complementary resources such as finance, land, equipment, and market networks. These contextual factors influence both enterprise sustainability and progression into commercialisation.

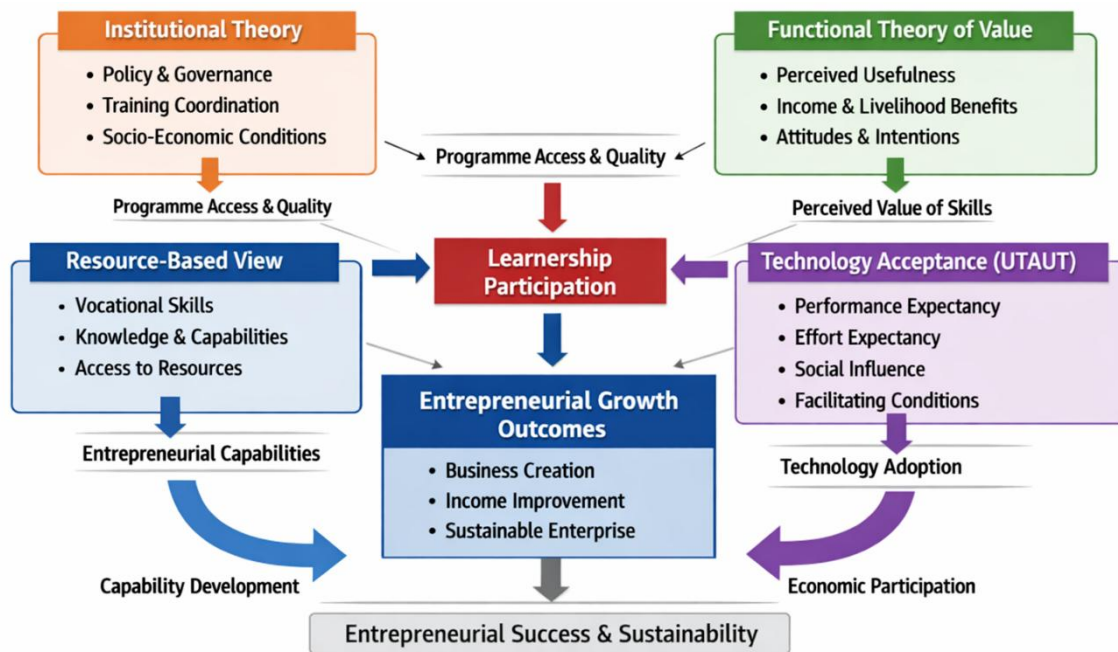


Figure 5: Integrated Conceptual Framework.

Developed by the Researcher

The framework further incorporates a technological adoption dimension through UTAUT, recognising the increasing role of digital tools in contemporary agricultural entrepreneurship. Technology acceptance is influenced by performance expectancy, effort expectancy, social influence, and facilitating conditions, all of which shape beneficiaries' willingness to utilise digital platforms for market engagement, financial management, and production optimisation (Venkatesh et al., 2003; Dwivedi et al., 2019; Triandini et al., 2023). Digital readiness, therefore, enhances the capacity of entrepreneurial competencies to generate economic value and expand market participation.

The conceptual model illustrates a sequential and interactive process through which institutional conditions influence learnership participation and training experiences, which, in turn, shape perceived value and the development of entrepreneurial competencies. These competencies, moderated by access to resources and enabling socio-economic conditions, contribute to entrepreneurial growth outcomes such as enterprise start-up, expansion of farming activities, income generation, and improved market participation. Technology acceptance is positioned as an enabling behavioural mechanism that strengthens the relationship between competency development and entrepreneurial performance.

The framework, therefore, proposes that entrepreneurial growth is not solely determined by training participation but rather emerges from the alignment of systemic support, motivational drivers, capability development, resource mobilisation, and technological adoption. This integrated perspective guides the empirical analysis by informing variable selection, the interpretation of quantitative relationships, and the triangulation of qualitative insights into the effectiveness of AgriSETA learnership programmes in promoting entrepreneurial progression.

3.7 CHAPTER SUMMARY

This chapter presented the theoretical foundations guiding the study's examination of AgriSETA learnership effectiveness. It outlined the role of learnerships within vocational training and situated them conceptually through institutional theory, the functional theory of value, the resource-based view, and user acceptance theory. Additional perspectives, including sustainability-oriented theories, digital transformation frameworks, cultural and socio-economic theories, and behavioural change models such as ADKAR, were incorporated to broaden the analytical scope.

The chapter also discussed entrepreneurial competencies in agriculture, highlighting the skills required to navigate uncertainty, adopt innovation, and sustain productive enterprises. It examined gaps in applying existing theories to learnerships and emphasised the importance of balancing global frameworks with local contextual considerations. Case study evidence has shown that, although learnerships are theoretically well-aligned with established models of skills development, their practical implementation remains uneven.

Collectively, these theoretical insights provide a multidimensional lens for analysing how learnerships shape entrepreneurial capability, labour market readiness, and commercialisation pathways. They establish the foundation for the empirical analysis that follows, ensuring that subsequent chapters are grounded in a coherent and contextually relevant theoretical base.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 INTRODUCTION

This chapter outlines the methodological approach used to address the study's research objectives. It explains the research paradigm, guiding philosophical assumptions, research design, sampling procedures, data collection processes, and the analytical techniques employed. A sequential explanatory mixed-methods strategy was adopted. The study began with a quantitative phase to identify patterns in learner competence, outcomes, and progression, followed by a qualitative phase to explore the underlying reasons behind these patterns. This approach ensured analytical depth and strengthened the validity of the findings. The chapter provides the methodological foundation for the quantitative results presented in Chapter 5, the qualitative insights reported in Chapter 6, and the integrated interpretation developed in Chapter 7 (Draucker et al., 2020).

4.2 RESEARCH PARADIGM (PRAGMATISM)

The study was guided by the pragmatic research paradigm, which views knowledge as meaningful when it supports practical problem-solving and leads to workable outcomes. Pragmatism is well-suited for research questions that require flexibility in method selection, rather than strict adherence to a single philosophical position. It acknowledges that complex educational and socio-economic challenges, such as those present in vocational and agricultural training, cannot be fully understood through a single form of evidence alone (Gobo, 2023).

Pragmatism supports the use of both quantitative and qualitative approaches because each offers distinct insights into the problem under investigation. In this study, the quantitative phase enabled the measurement of patterns in technical competence, entrepreneurial capability, digital readiness, and early post-training activity. However, these patterns required contextual interpretation to understand why competencies did not consistently translate into employment or entrepreneurial progression. The qualitative phase, therefore, provided insight into institutional conditions, workplace practices, and learner experiences that shaped post-training outcomes (Ahmed, 2024).

This paradigm was particularly appropriate for evaluating AgriSETA learnerships, as interactions between individual capability, institutional structures, and the broader rural environment shape

the effectiveness of such programmes. Pragmatism enabled the study to analyse these interactions by connecting measurable outcomes to real-world conditions. It also provided the philosophical basis for integrating findings across Chapters 5 and 6, ensuring that the final interpretation in Chapter 7 reflected both empirical evidence and the lived experiences of participants.

Pragmatism, therefore, offered the methodological flexibility and conceptual coherence needed to investigate how competence, opportunity, and context intersect within agricultural learnerships. It ensured that the research design remained problem-centred, evidence-driven, and aligned with the study's explanatory objectives.

4.3 RESEARCH PHILOSOPHIES

The study drew on philosophical assumptions from both positivist and interpretivist traditions. The positivist orientation shaped the quantitative phase, which sought to identify measurable patterns in learners' technical competence, entrepreneurial capability, and progression. This stance assumes that selected aspects of the training experience can be objectively captured and analysed through statistical procedures (Gamage, 2025).

The interpretivist orientation informed the qualitative phase, which examined participants' experiences and perceptions of the conditions influencing post-training outcomes. This perspective recognises the significance of subjective meaning in understanding how learners apply their competencies within real-world settings (Tanlaka & Aryal, 2025).

Through the pragmatic paradigm, these assumptions were integrated to support a balanced methodological approach that combines objective measurement with contextual insight. This alignment underpins the explanatory logic developed across Chapters 5, 6, and 7.

4.4 RESEARCH DESIGN

The study employed a mixed-methods research design to provide a comprehensive and contextually grounded understanding of learnership outcomes. The design combined the strengths of quantitative measurement with qualitative explanation, enabling the study to capture both the extent of learners' technical and entrepreneurial competence and the contextual conditions that shaped their post-training progression. The quantitative phase established measurable patterns, while the qualitative phase explored the underlying reasons for those

patterns. This structure aligns with the study's explanatory intent and supports the integrated interpretation presented in Chapter 7 (Kerari et al., 2022).

The explanatory sequential mixed-methods design was particularly appropriate for this study because it enabled qualitative exploration of the contextual factors influencing the self-reported entrepreneurial outcomes identified in the quantitative phase. This design, therefore, strengthened interpretive depth when objective longitudinal enterprise performance data were unavailable.

4.4.1 Work-Integrated Learning as a Methodological Orientation

Work-Integrated Learning (WIL) offers a valuable methodological lens for understanding how skills development unfolds within AgriSETA-accredited learnerships. Although WIL is typically conceptualised as a pedagogical and curriculum design principle, it also shapes the methodological orientation of research on vocational systems. This is because WIL requires learning to be examined not only as a classroom-based process but as an experiential one situated within both institutional and workplace environments (Mesuwini et al., 2023).

WIL emphasises the interaction between theoretical instruction and structured workplace exposure. Research designs that investigate learnerships must therefore account for how competence develops through cycles of exposure, practice, feedback, and reflection. The explanatory sequential mixed-methods design employed in this study aligns with WIL principles, as it first quantifies learner outcomes and then qualitatively explores how workplace conditions, mentoring practices, and institutional processes influence capability development (Kiruthika et al., 2024). This sequencing enables a more comprehensive understanding of how formal curriculum structures and real-world workplace environments influence learning.

WIL also highlights the situated nature of competence, which is inextricably linked to context. Agricultural learnerships take place in production settings characterised by seasonal variation, resource constraints, and diverse operational demands. The methodology, therefore, incorporates qualitative inquiry to capture contextual nuances that quantitative measures alone cannot reveal. Insights from facilitators, host employers, and AgriSETA officials reveal how institutional capacity, workplace culture, and the quality of supervision impact learners' ability to apply theoretical knowledge in practice (Khetsha & Makhoahle, 2023).

Additionally, WIL highlights the importance of learner agency and the central role of mentors.

By integrating interviews with supervisors and AgriSETA officials, training facilitators, host employers, the methodology recognises that competence development is relational. This supports a more holistic assessment of learnership effectiveness, particularly where learners' experiences depend on access to equipment, the availability of mentoring, and the consistency of workplace support (Pretti et al., 2020).

Embedding WIL as a methodological orientation strengthens the study's capacity to analyse how learnership outcomes emerge through the interaction of curriculum, institutional processes, and workplace environments. It ensures that the methodological approach remains grounded in the experiential realities of agricultural training.

4.4.2 Quantitative Method

The quantitative phase involved administering a structured questionnaire to learners who had completed AgriSETA agricultural learnerships. The instrument measured key constructs relevant to the study, including technical competence, entrepreneurial and innovation capability, digital readiness, and perceived structural constraints. This phase generated numerical data that informed descriptive statistics, reliability testing, and inferential analysis, including regression modelling. The quantitative results in Chapter 5 provided initial insight into competence development and identified areas where learners experienced limited progression (Singh et al., 2024).

4.4.3 Qualitative Method

The qualitative phase consisted exclusively of semi-structured individual interviews conducted with selected stakeholders, including training facilitators, host employers, and AgriSETA officials. No focus group discussions were conducted during the qualitative data collection process. Participants were purposively selected based on their direct involvement in the implementation and support of AgriSETA learnership programmes.

The qualitative strand aimed to explore stakeholders' experiences of training delivery, the application of acquired skills in practical contexts, and the institutional and structural conditions influencing participants' progression towards entrepreneurial or employment outcomes. This phase was designed to explain and contextualise the statistical patterns identified in the quantitative phase, particularly instances in which technical competence did not translate into entrepreneurial engagement or labour market participation.

Interviews were conducted using a semi-structured interview schedule, audio-recorded with participants' consent, and subsequently transcribed for analysis. The data were analysed using thematic analysis to identify recurring patterns, explanatory insights, and contextual influences that deepen the quantitative findings presented in Chapter 5 and inform the integrated discussion in Chapter 7 (Kiger & Varpio, 2020).

4.4.4 Cross-Sectional Research Design

A cross-sectional design was used, where data were collected at a single point in time from participants who had recently completed the learnerships. This approach was appropriate for assessing immediate post-training competence and capturing early progression experiences. It provided a snapshot of learner outcomes, enabling the identification of measurable patterns in competence and constraints that required further exploration through qualitative inquiry. The design supported the sequencing of the study, as the quantitative findings in Chapter 5 informed the questions pursued in the qualitative phase in Chapter 6 (Adhikary et al., 2022).

4.4.5 Mixed Method Research (MMR) Design

The study employed a mixed-methods research design to leverage the complementary strengths of quantitative and qualitative approaches. This design was necessary because the research problem required both measuring learner competencies and interpreting the institutional and contextual factors that shaped post-training outcomes. The quantitative phase provided structured and measurable evidence on key constructs, including technical competence, entrepreneurial capability, digital readiness, and perceived structural constraints. These data offered an overview of patterns across the learner sample and highlighted areas where progression into employment or enterprise was limited (Ahmed et al., 2024).

The qualitative phase then extended this analysis by generating context-rich explanations for the statistical findings. Interviews with facilitators, host employers, and AgriSETA officials helped clarify why learners with similar levels of competence progressed differently and how workplace exposure, institutional capacity, and environmental constraints influenced their ability to apply acquired skills. This interpretive strand enabled a deeper understanding of the nuances that quantitative results alone could not capture (Kiger & Varpio, 2020).

Integrating both strands produced a more comprehensive account of learner outcomes than either

method could offer independently. The quantitative results established the trends requiring explanation, while the qualitative findings addressed the underlying mechanisms that shaped those trends. This integration also enhanced the study's credibility by allowing convergence, complementarity, and expansion across methods, which strengthened the explanatory logic connecting Chapters 5, 6, and 7 (Toyon, 2021).

The adoption of a mixed-methods design was therefore essential to achieving the study's aim of producing findings that were empirically robust and grounded in real-world experience. It aligned with the pragmatic paradigm guiding the research, ensuring that the analysis remained both contextually informed and methodologically rigorous.

4.4.6 Rationale for Adoption of Mixed Methods

Mixed methods were employed because the research problem necessitated an approach that could capture both measurable patterns in competence development and the contextual factors influencing post-training outcomes. The quantitative phase provided the basis for identifying trends in technical competence, entrepreneurial capability, digital readiness, and early post-training activity. However, quantitative data alone cannot explain why gains in competence do not consistently translate into employment or entrepreneurial progression, particularly within rural agricultural environments where structural barriers persist (Demkowicz et al., 2025).

The qualitative phase addressed this limitation by offering insight into the institutional conditions, workplace practices, and learner experiences that shaped the application of competencies. Interviews with facilitators, host employers, and AgriSETA officials enabled the study to uncover influences that numerical indicators could not fully capture, including workplace culture, resource constraints, variable mentorship quality, and gaps in post-training support systems (Kiger & Varpio, 2020).

Combining these approaches increased the credibility and explanatory power of the findings. The quantitative results informed the design of the qualitative phase, ensuring that the interviews focused on the most salient statistical patterns requiring contextual interpretation. This alignment strengthened internal consistency and facilitated the triangulation of evidence, which is essential when analysing complex vocational systems where both capability and context interact to shape outcomes (Ahmed, 2024).

The use of mixed methods, therefore, aligned with the study's pragmatic paradigm by allowing multiple forms of evidence to inform the inquiry. It enabled a more comprehensive interpretation of learner progression, ensuring that the conclusions presented in Chapter 7 reflect both measurable outcomes and the participants' lived experiences.

4.4.7 Sequential Explanatory Strategy

The study employed a sequential explanatory strategy, starting with a quantitative phase and followed by a qualitative phase designed to interpret and further explore the initial statistical findings. This structure was selected because the research problem required both the identification of measurable trends and the exploration of the contextual factors that shaped those trends. The sequential design ensured that each methodological phase contributed to distinct but complementary forms of evidence (Toyon, 2021).

The quantitative phase served as the foundation, providing empirical patterns relating to technical competence, entrepreneurial capability, digital readiness, collaboration, and early post-training outcomes. These results highlighted areas where competence development was strong and where progression into employment or enterprise activity was limited. However, the statistical patterns alone could not explain the underlying reasons for these disparities, particularly in rural and resource-constrained contexts (Ahmed et al., 2024).

The qualitative phase was therefore purposefully scheduled after the quantitative analysis to investigate the factors that influenced the translation of competencies into practical outcomes. Semi-structured interviews enabled the study to examine institutional arrangements, workplace practices and systemic constraints that shaped learner trajectories. This sequencing ensured that the qualitative inquiry was directly informed by and responsive to the quantitative findings, thereby strengthening the coherence of the overall analysis (Kiger & Varpio, 2020).

Integration occurred during the interpretation stage, where insights from both phases were compared, contrasted, and synthesised. This enabled a comprehensive understanding of why learners achieved specific competencies yet encountered barriers in applying them, and how institutional capacity, workplace conditions, and support structures shaped these experiences. The structured sequencing supported the development of the integrated interpretation presented in Chapter 7, ensuring that conclusions and recommendations were grounded in both numerical evidence and contextual insight.

The sequential explanatory strategy was therefore essential to the study's explanatory aim. It provided methodological clarity, improved analytic depth, and enabled a more accurate interpretation of the effectiveness of AgriSETA learnerships in supporting entrepreneurial progression.

4.5 STUDY POPULATION

The study population comprised individuals and institutional actors directly involved in AgriSETA-accredited agricultural learnerships in the Eastern Cape Province. This included learners who had completed the programmes, facilitators responsible for theoretical instruction, host employers who oversaw workplace-based learning, and AgriSETA officials involved in programme coordination and quality assurance. These groups represent the core stakeholders within the learnership system and collectively shape the delivery of training, learner experiences, and post-training opportunities (Chand, 2025).

Learners formed the primary population for the quantitative phase because they could provide direct evidence of competence development, digital readiness, entrepreneurial confidence, and early post-training outcomes. Their responses enabled the identification of measurable patterns that informed the qualitative inquiry in Chapter 6. Facilitators and host employers contributed insight into instructional quality, workplace exposure, mentoring practices, and the operational realities that influence the application of skills in authentic contexts. AgriSETA officials provided perspectives on policy intent, programme coordination, institutional capacity, and systemic challenges affecting implementation.

Including actors across these levels ensured that the study captured the full complexity of the learnership environment. Their collective insights were crucial for understanding how competencies are developed, how support structures operate, and how contextual constraints impact learner trajectories. This broad population base strengthened the explanatory power of the mixed-methods design and supported the integrated interpretation presented in Chapter 7.

4.6 SAMPLING METHODS

Sampling methods were designed to capture perspectives from participants directly involved in AgriSETA-accredited agricultural learnerships. Given the study's focus on learner outcomes and stakeholder experiences within AgriSETA-accredited agricultural learnerships, the sampling

approach prioritised access to participants with relevant insight into training processes, workplace exposure, and post-training progression. The study, therefore, employed non-probability sampling techniques suitable for mixed-methods research, where depth of information is more important than statistical representativeness (Makwana et al., 2023).

4.6.1 Non-probability Sampling

Non-probability sampling was used for both the quantitative and qualitative phases. Purposive sampling enabled the inclusion of participants with direct experience of programme delivery and outcomes. In the quantitative phase, this involved former learners who had completed AgriSETA learnerships. In the qualitative phase, purposive sampling targeted facilitators, host employers, and AgriSETA officials with operational knowledge of training implementation and support. Convenience sampling was also applied, as participants were selected based on their availability during the data collection period. These techniques ensured that the study captured relevant and informed perspectives necessary for addressing the research objectives (Nikolopoulou, 2022).

4.6.2 Probability Sampling

Probability sampling was not appropriate for this study. The population was bounded, dispersed across multiple training sites, and difficult to access through random selection. Moreover, the study required participants with specific experience in the agricultural learnership system, which made purposive and convenience sampling more appropriate. This approach is consistent with mixed-methods designs that prioritise relevance, depth, and contextual insight over generalisability (Ahmed, 2024).

4.6.3 Selected Sampling Method

The study employed a non-probability sampling strategy that combined purposive and convenience sampling techniques. Purposive sampling ensured that all participants had substantive exposure to the learnership environment. Convenience sampling allowed the researcher to access participants who were available and willing to participate during the data collection period. This combination supported the study's explanatory aims and ensured a coherent link between quantitative patterns and qualitative explanations (Tajik et al., 2024).

4.6.4 Sampling Techniques for This Study

Sampling techniques varied across the quantitative and qualitative phases, in line with the sequential explanatory design. In the quantitative phase, purposive sampling targeted learners who had completed the AgriSETA agricultural learnerships and could provide measurable data on their competence and progression. In the qualitative phase, purposive and convenience sampling were employed to select facilitators, host employers, and AgriSETA officials who could explain the patterns identified in the quantitative results. Learners were not included in the qualitative interviews, as the intention was to obtain institutional and workplace perspectives on programme effectiveness and post-training transition dynamics. This enabled the study to integrate measurable learner outcomes with contextual stakeholder explanations, supporting the explanatory aims of the mixed-methods design (Hamm et al., 2023).

4.7 SAMPLE SIZE

The quantitative sample consisted of learners who had completed AgriSETA-accredited agricultural learnerships and were available during the data collection period. This group provided a sufficiently large dataset to conduct descriptive analysis, reliability testing, correlation analysis, and regression modelling, as reported in Chapter 5. The final quantitative sample enabled the study to identify statistically meaningful patterns in competence development, digital readiness, entrepreneurial capability, and early post-training outcomes (Hennink & Kaiser, 2022).

The qualitative sample was intentionally smaller, consistent with established guidance for in-depth thematic analysis. It comprised learners, facilitators, host employers, and AgriSETA officials who were selected for their ability to explain, contextualise, and elaborate on the statistical patterns emerging from the quantitative phase. This purposive selection ensured that the qualitative data reflected the range of institutional roles and experiences required to interpret the quantitative results. The sample size was therefore appropriate for achieving analytic depth while avoiding unnecessary redundancy in the data.

The combined sample provided the breadth needed for quantitative general patterns and the depth required for qualitative explanation. This balance strengthened the explanatory power of the mixed-methods design. It supported the integrated analysis presented in Chapter 7, where both strands of evidence are brought together to interpret learner outcomes and systemic constraints.

4.8 DATA COLLECTION INSTRUMENTS

Two instruments were employed to support the mixed-methods design. For the quantitative phase, a structured questionnaire was developed to measure participants' technical competence, entrepreneurial capability, innovation, and digital practices, as well as their perceived structural and institutional constraints. The instrument consisted primarily of closed-ended Likert-type items adapted from established measures in entrepreneurship training and skills development research. This format enabled consistent scoring and supported the statistical analyses reported in Chapter 5, including reliability testing, correlation analysis, and regression modelling.

For the qualitative phase, data were collected exclusively through semi-structured individual interviews. An interview guide was developed to explore participants' experiences of training delivery, workplace exposure, application of acquired skills, and challenges encountered during transitions to employment or entrepreneurial activity. The guide was organised around thematic domains aligned with the research objectives and the quantitative constructs measured in the survey. The semi-structured format allowed for probing and clarification while ensuring comparability across interviews.

The use of structured and semi-structured instruments enhanced methodological rigour by combining consistency in measurement with depth of contextual interpretation. Qualitative insights derived from the interviews informed the thematic analysis presented in Chapter 6 and supported the integrated interpretation of findings in Chapter 7.

4.9 PILOT STUDY

A pilot study was conducted to assess the clarity, appropriateness, and functionality of the data collection instruments prior to full-scale administration. For the quantitative phase, the structured questionnaire was piloted with a small group of learners who had previously completed AgriSETA-accredited agricultural learnerships. Feedback from the pilot enabled refinements to item wording, response options, and the alignment of questionnaire items with the study's constructs. These adjustments improved measurement precision and supported the reliability analyses presented in Chapter 5.

For the qualitative phase, the semi-structured interview schedule was piloted with a small number of participants from relevant stakeholder groups, including training facilitators and host

employers. The pilot interviews were used to assess whether the questions elicited coherent and sufficiently detailed responses aligned with the study objectives. This process also informed minor revisions to question sequencing, phrasing clarity, and the use of probing techniques to deepen responses. No focus group instruments were piloted, as qualitative data collection in the study was based solely on individual interviews.

The pilot study strengthened the methodological quality of the research by ensuring that both instruments were appropriately calibrated for the sequential explanatory mixed-methods design. This preparatory phase enhanced the validity of the quantitative measures and supported the depth and contextual relevance of qualitative data used to explain statistical trends.

4.10 ADMINISTRATION OF RESEARCH INSTRUMENTS

The quantitative questionnaire was administered in person at selected training centres and host employer sites. Before completion, participants were briefed on the study's purpose, voluntary participation, confidentiality provisions, and procedures for completing the instrument. The researcher remained available during administration to clarify queries while ensuring that responses were completed independently. This approach supported high response quality and strengthened the validity of the quantitative data analysed in Chapter 5.

The qualitative phase was conducted after preliminary analysis of the quantitative results. Semi-structured individual interviews were undertaken with purposively selected stakeholders, including training facilitators, host employers, and AgriSETA officials. Interviews were conducted at mutually agreed locations, audio-recorded with participants' consent, and transcribed verbatim for analysis. Conducting the qualitative strand after the quantitative phase enabled focused exploration of the contextual and institutional factors underlying the statistical patterns identified earlier, thereby strengthening the explanatory integration of findings in Chapter 7.

4.11 RELIABILITY AND VALIDITY

Ensuring reliability and validity was essential for establishing the credibility and analytical robustness of the study's findings. Given the sequential explanatory mixed-methods design, strand-specific procedures were implemented to enhance the quality of both the quantitative and qualitative data. These procedures strengthened the internal coherence of the analysis and

supported the integration of findings across the quantitative and qualitative phases of the research (Noble & Smith, 2025).

4.11.1 Reliability and Validity in the Quantitative Phase

Reliability refers to the consistency and stability of measurement, while validity concerns the extent to which an instrument accurately measures the constructs it is intended to assess (Hidayana, 2025). Internal consistency reliability of the questionnaire scales was evaluated using Cronbach's alpha coefficients for measures of technical competence, entrepreneurial capability, innovation practices, digital readiness, and perceived structural constraints. Revisions informed by the pilot study improved item clarity and reduced ambiguity, contributing to acceptable reliability levels reported in Chapter 5.

Content validity was strengthened through expert review of the questionnaire to ensure that items adequately reflected key dimensions of learnership outcomes. Construct validity was enhanced by aligning measurement items with established conceptual definitions and the theoretical framework underpinning the study. These procedures increased confidence in the statistical relationships and regression results presented in Chapter 5.

4.11.2 Trustworthiness in the Qualitative Phase

Trustworthiness in the qualitative strand was addressed through the criteria of credibility, transferability, dependability, and confirmability (Ahmed, 2024). Credibility was enhanced by conducting semi-structured individual interviews with stakeholders who had direct experience of AgriSETA learnership implementation. Interview questioning was informed by patterns emerging from the quantitative analysis, enabling focused exploration of contextual explanations for statistical trends.

Dependability was supported through the maintenance of a systematic audit trail documenting interview procedures, transcription processes, coding decisions, and theme development. Thematic analysis followed a structured process of familiarisation, coding, theme generation, and refinement to ensure consistency in interpretation across transcripts (Ahmed, 2024). Confirmability was strengthened by grounding interpretations in participants' accounts and maintaining reflexive awareness of the researcher's role in the analytical process.

Transferability was facilitated by detailed contextual descriptions of the learnership environment and participants' experiences, enabling readers to assess the potential applicability of the findings to comparable training and entrepreneurial development settings. These procedures ensured that qualitative insights presented in Chapter 6 offered a credible explanation of the statistical patterns identified in Chapter 5.

4.12 DATA ANALYSIS METHOD

Data analysis followed the sequential explanatory design, with the quantitative phase preceding and informing the qualitative phase. Quantitative data was captured, cleaned, and analysed using descriptive statistics, reliability testing, and inferential procedures, including regression modelling. These analyses identified patterns in technical competence, entrepreneurial capability, and structural constraints, allowing for an examination of how these factors relate to post-training progression. The quantitative results are presented in Chapter 5 (Ahmed et al., 2024).

Qualitative data was analysed using thematic analysis. Interview transcripts were coded inductively and deductively, guided by the research objectives and the trends emerging from the quantitative findings. This approach allowed the qualitative phase to explain why technical competence did not consistently lead to entrepreneurial or employment outcomes. The analysis generated themes that clarified the statistical results and informed the presentation of findings in Chapter 6 (Naeem et al., 2023).

Integration occurred during the interpretation stage, where insights from both phases were compared and synthesised to produce a coherent account of learner progression. This integrated analysis underpins the conclusions and recommendations presented in Chapter 7.

4.13 ELIMINATION OF BIAS

Several procedures were applied to minimise bias across the research process. In the quantitative phase, the questionnaire was administered using standardised instructions to ensure consistency and reduce interviewer influence. Items were phrased clearly and neutrally to avoid leading responses, and the pilot study helped identify and correct questions that could introduce ambiguity or misinterpretation.

In the qualitative phase, bias was mitigated through reflexive practice, where the researcher

maintained awareness of personal assumptions and refrained from imposing interpretations on participants' accounts. Probing questions were used to seek clarification rather than direct responses. Transcriptions were checked against audio recordings to ensure accuracy, and coding followed systematic and transparent procedures to enhance dependability. These measures strengthened the credibility and fairness of the findings presented in Chapters 5 and 6 (Muthanna & Alduais, 2023).

4.14 ETHICAL CONSIDERATIONS

Ethical approval for the study was obtained from the relevant university research ethics committee prior to the commencement of data collection (Ethics Clearance Reference Number: HSSREC/00008125/2025). Participation in the study was voluntary, and all participants received clear information regarding the purpose of the research, the procedures involved, and their right to withdraw at any stage without penalty. Written informed consent was obtained before participation.

Confidentiality and anonymity were maintained throughout the research process. Identifying information was removed from completed questionnaires, interview transcripts, and electronic datasets. Participants were assigned unique codes to protect their identities. All data were securely stored in password-protected digital files accessible only to the researcher. Audio recordings of interviews were handled with strict confidentiality and deleted after transcription and verification were completed.

The study was conducted in accordance with recognised ethical principles of respect for persons, beneficence, and justice. Care was taken to minimise any potential discomfort or risk to participants. Findings are reported in aggregated form to ensure that individual participants or organisations cannot be identified.

4.15 CHAPTER SUMMARY

This chapter outlined the methodological approach used to investigate the effectiveness of AgriSETA agricultural learnerships in supporting entrepreneurial growth. The study was grounded in a pragmatic paradigm, drawing on both positivist and interpretivist assumptions to support the sequential explanatory mixed-methods design. The quantitative phase provided measurable evidence of technical competence, entrepreneurial capability, digital readiness, and

structural constraints. In contrast, the qualitative phase offered contextual explanations for these patterns through interviews with facilitators, employers, and AgriSETA officials.

The chapter detailed the study population, sampling strategies, data collection instruments, and pilot testing procedures, followed by an explanation of how the research instruments were administered. Procedures to ensure reliability, validity, and the elimination of bias were also presented. Quantitative data was analysed using descriptive and inferential techniques, while qualitative data were examined through thematic analysis (Ahmed et al., 2025). Ethical considerations were addressed throughout, ensuring that the study met institutional standards for responsible research.

These methodological choices established a rigorous foundation for the findings reported in Chapters 5 and 6, supporting the integrated interpretation presented in Chapter 7.

CHAPTER 5: QUANTITATIVE DATA ANALYSIS AND RESULTS

5.1 INTRODUCTION

This chapter presents the quantitative findings of the study in an objective, results-only format. Tables and figures are reported first, and interpretation is deferred to Chapter 7. The analyses proceed sequentially from descriptive statistics to inferential models, addressing the research objectives empirically. The dataset comprises $N = 230$ valid responses. All Likert-type items were coded on a 1-5 scale, where higher values reflect more favourable evaluations. The only multi-item construct is the curriculum index, which is assessed for internal consistency using Cronbach's alpha. In contrast, single-item indicators are presented descriptively without reliability estimation (Edelsbrunner et al., 2025).

All tests were conducted at a two-tailed $\alpha = .05$, the conventional threshold for social science research (Kang, 2021). Effect sizes accompany all results: r for correlations, η^2 or ω^2 for ANOVA, standardised β for linear regression, and odds ratios (OR) with 95% confidence intervals for logistic regression. Model assumptions were verified through residual diagnostics, multicollinearity checks, and calibration tests, with robust or non-parametric alternatives applied as sensitivity analyses where necessary (Kroes & Finley, 2023).

Categorical variables are reported as frequencies and %ages, and scale variables are reported as means and standard deviations, rounded to two decimal places. Each figure is paired with its corresponding table and referenced in sequence. P-values are presented to three decimals, or as $p < .001$.

The quantitative analyses presented here aim to empirically assess the relationships between trainee competencies, curriculum relevance, and entrepreneurial outcomes within AgriSETA learnerships. This structure ensures methodological transparency while maintaining interpretive neutrality, with discussion reserved for the subsequent chapters. While this chapter presents the quantitative patterns that emerged from the survey data, these results also raise questions about the underlying conditions shaping learners' outcomes, which are explored further in Chapter 6.

5.2 PRESENTATION OF RESULTS: DEMOGRAPHICS

This section presents the demographic profile of survey respondents to provide contextual grounding for subsequent inferential analyses. Demographic variables are reported descriptively because they characterise the study population and are later utilised as grouping or control variables in regression and comparative analyses. The reporting focuses on clarity and parsimony by consolidating demographic indicators into a single integrated table.

The sample consists primarily of young participants, with the majority falling into the 18-25 (47.6%) and 26-35 (42.2%) age categories. Participants aged 35 and above constitute a relatively small proportion (10%), indicating that the learnership programmes largely attract youth and early-career individuals. This demographic pattern is consistent with national skills development priorities that emphasise youth participation in vocational and agricultural training initiatives.

In terms of gender composition, females represent a substantial majority (70.7%) of respondents, while males account for 29.3%. This distribution aligns with broader participation trends in the post-school education and training system, where female enrolment in vocational programmes has increased over time.

Regarding educational attainment, more than half of respondents (51.5%) hold a diploma or certificate, while 45.9% hold a matric qualification. Only a small proportion (2.6%) reports holding a bachelor's degree. This educational profile reflects the intended target population of learnership programmes, which primarily recruit matriculated youth seeking vocational pathways aligned with National Qualifications Framework levels associated with entry-level occupational training.

Geographically, the sample is predominantly rural (89.1%), with a smaller proportion residing in urban areas (10.9%). This distribution is consistent with the spatial concentration of agricultural training interventions in rural communities characterised by limited formal employment opportunities. The demographic characteristics presented here provide an essential contextual baseline for interpreting the subsequent analyses of training experiences, competency development, and entrepreneurial outcomes.

Table 1: Demographic Profile of Respondents (N = 230)

Variable	Category	Frequency	Percentage (%)
Age	18-25	109	47.6
	26-35	97	42.2
	36-45	19	8.3
	46-55	4	1.7
	Missing	1	0.4
Gender	Female	162	70.7
	Male	67	29.3
	Missing	1	0.4
Education Level	Diploma/Certificate	118	51.5
	Matric	105	45.9
	Bachelor's degree	6	2.6
	Missing	1	0.4
Region	Rural	204	89.1
	Urban	25	10.9
	Missing	1	0.4

5.3 MEASUREMENT RELIABILITY AND VALIDITY

This section evaluates the reliability and validity of the quantitative measures used in the study to ensure that the constructs employed in subsequent inferential analyses are empirically coherent and methodologically sound. Reliability testing was undertaken prior to inferential modelling in order to minimise the influence of measurement error on statistical estimates, a standard requirement in survey-based research (Hays et al., 2021).

All survey items were measured on five-point Likert scales ranging from low to high agreement or evaluation. Because the majority of constructs in the study were operationalised using single-

item indicators, internal consistency testing was applied only to composite indices derived from multiple items. Reliability analyses were conducted using listwise deletion for the relevant scale items, while subsequent descriptive and inferential analyses employed pairwise deletion in order to maximise the use of available data.

The principal multi-item construct was the curriculum index, which combines three dimensions of training experience: perceived training quality, curriculum relevance, and exposure to digital and climate-smart agricultural practices. In addition, a two-item skills index was constructed to assess the coherence between technical agricultural competencies and business-related competencies. Given the limited number of items, reliability for this index was assessed using inter-item correlation and the Spearman-Brown coefficient, approaches commonly used in exploratory applied research settings (Ellis, 2023).

Interpretation of reliability and validity implications is presented in Chapter 7, while this section focuses on reporting the statistical properties of the measures.

5.3.1 Reliability Analysis

Internal consistency testing was conducted to assess the reliability of the composite measures. The curriculum index produced a Cronbach's alpha coefficient of 0.674 based on 230 valid listwise observations. Although slightly below the conventional benchmark of 0.70, this value is considered acceptable in exploratory social science research, particularly when indices combine conceptually related but distinct dimensions of programme experience (Adeniran, 2025).

Item-level diagnostics indicate that each component contributes meaningfully to the overall construct. Removal of any individual item does not substantially improve the reliability coefficient, supporting retention of the full index for subsequent analyses.

The two-item skills index yielded a Pearson inter-item correlation of 0.562 and a Spearman-Brown reliability coefficient of 0.720, suggesting moderate internal coherence between technical and business competency indicators. These statistics should be interpreted cautiously, given the low item count, but they provide supportive evidence of consistency in reported competency development.

Table 2: Reliability Statistics for Composite Measures

Scale	Reliability Coefficient	N
Curriculum index (3 items)	Cronbach's $\alpha = 0.674$	230
Skills index (2 items)	Spearman-Brown $\alpha = 0.720$	230

Table 3: Curriculum Index Item Diagnostics

Item	Item–Total Correlation	Alpha if Deleted
Training quality	0.430	0.660
Curriculum relevance	0.640	0.392
Digital and climate-smart practices	-	-

(All items coded 1-5; higher values indicate more favourable evaluations.)

5.3.2 Validity Assessment

Instrument validity was assessed using complementary procedures appropriate for exploratory survey research. Content and face validity were established during instrument development through expert review and pilot testing to ensure that questionnaire items adequately represented dimensions of agricultural training experience and entrepreneurial capability (Lambert & Newman, 2022).

Construct validity was evaluated pragmatically by examining expected statistical relationships among variables. The measures theoretically related showed positive, statistically significant correlations in subsequent analyses, supporting convergent validity. At the same time, the absence of excessively high intercorrelations suggested that the indicators captured distinct aspects of programme experience, indicating acceptable discriminant adequacy (Cheung et al., 2024).

Additional evidence of validity was obtained through group-comparison analyses. Selected variables demonstrated statistically significant differences across educational and institutional

categories in line with theoretical expectations regarding skill acquisition and training exposure. Such patterns provide criterion-related support for the measures' sensitivity.

Advanced validation procedures, including confirmatory factor analysis and measurement invariance testing, were not conducted because single-item indicators represented most constructs. Within the context of an exploratory case-study design, the observed correlation structure and known-group differences provide sufficient evidence that the measures functioned appropriately for subsequent regression modelling.

5.4 DESCRIPTIVE ANALYSIS OF KEY CONSTRUCTS

This section presents descriptive statistics for the main variables of interest, forming the basis for subsequent inferential analyses. The purpose is to summarise patterns of responses and provide an empirical overview of participant perceptions across the study's core constructs.

Descriptive analysis is appropriate for this stage because it enables the identification of central tendencies, variability, and distributional patterns before testing hypotheses. These statistics support Objective 1 to Objective 4, which relate to perceptions of training quality, curriculum relevance, entrepreneurial confidence, and business start-up outcomes.

All continuous variables were measured on a 1-5 Likert scale, coded such that higher scores indicate more favourable evaluations. Means and standard deviations are reported, alongside sample size (*n*). Figures display bars with means and standard deviation error bars.

Categorical outcomes, such as business start-up status, are reported as frequencies and %ages. Descriptive results are interpreted in terms of magnitude only, with statistical comparisons and explanatory links deferred to Section 5.5 and Chapter 7.

Where applicable, benchmark references from comparable South African or SETA-based studies are included in the discussion chapters, rather than here, to maintain the results-only integrity of this section.

5.4.1 OBJECTIVE 1: ASSESS PERCEIVED QUALITY AND RELEVANCE OF THE AGRISETA LEARNERSHIP FOR AGRICULTURAL ENTREPRENEURSHIP.

5.4.1.1 Training Quality

Figure 6 illustrates the descriptive statistics for respondents' perceptions of training quality. This variable assesses the perceived effectiveness, organisation, and delivery of the AgriSETA learnership training.

Results indicate that respondents rated training quality highly, with a mean score of 4.57 (SD = 0.73, n = 230). The distribution is positively skewed, suggesting consistently favourable evaluations. Figure 6 displays the mean with standard deviation bars, with each bar labelled by its sample size and mean.

High scores on training quality indicate that participants viewed the instructional process, facilitation, and assessment mechanisms as effective. These results are consistent with prior evaluations of SETA learnerships, where training quality has been identified as a key contributor to trainee satisfaction and post-training confidence (SASSETA, 2025).

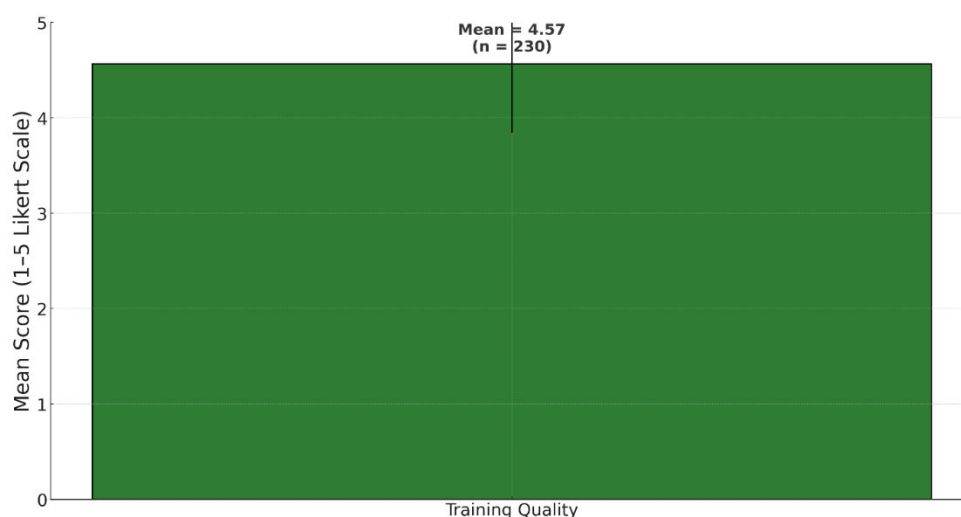


Figure 6: Mean Score for Training Quality

5.4.1.2 Curriculum Relevance

Figure 7 illustrates the descriptive statistics for respondents' perceptions of curriculum relevance. This variable captures the perceived alignment between the learnership curriculum and the demands of the agricultural sector.

Respondents reported moderately high ratings, with a mean score of 4.29 (SD = 0.82, n = 230). This pattern suggests that most participants viewed the curriculum as relevant to workplace requirements, although slightly less favourably than overall training quality. Figure 7 illustrates the distribution with mean bars and standard deviation indicators.

These descriptive results provide an empirical baseline for later inferential analysis exploring the relationship between curriculum relevance and entrepreneurial outcomes (Section 5.5). Comparable studies in the South African TVET and agricultural sectors have similarly reported moderate to high perceptions of significance, reflecting a partial alignment between training content and market needs (Sephokgole et al., 2021).

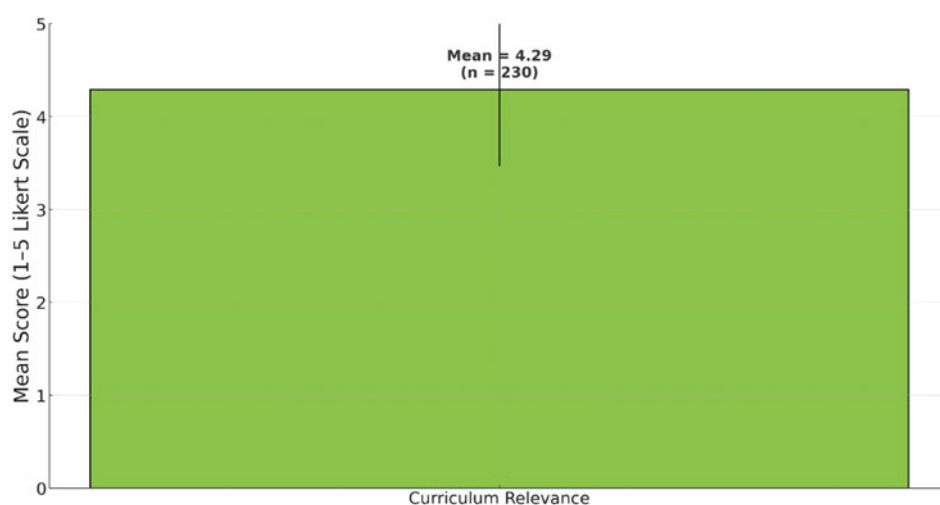


Figure 7: Mean Score for Curriculum Relevance

5.4.2 OBJECTIVE 2: EVALUATE GAINS IN TECHNICAL AND BUSINESS SKILLS THAT SUPPORT SELF-EMPLOYMENT AND ENTERPRISE GROWTH.

5.4.1.3 Technical Skills

Figure 8 illustrates the descriptive statistics for respondents' ratings of their technical agricultural skills. This variable reflects respondents' perceived mastery of sector-specific competencies acquired through the AgriSETA learnership.

Respondents reported high levels of confidence in their technical skills, with a mean score of 4.48 (SD = 0.82, n = 230). The consistently high ratings suggest that the training effectively enhanced trainees' capacity in applied agricultural practices. Figure 8 depicts the mean with an error bar representing one standard deviation, labelled with n and mean.

These results align with empirical findings that practical, hands-on training has a strong influence on trainee competence in vocational and agricultural education (Njati & Lideke, 2022). Such skills are considered crucial for promoting self-employment and productivity in small-scale farm enterprises (Maïga et al., 2020).

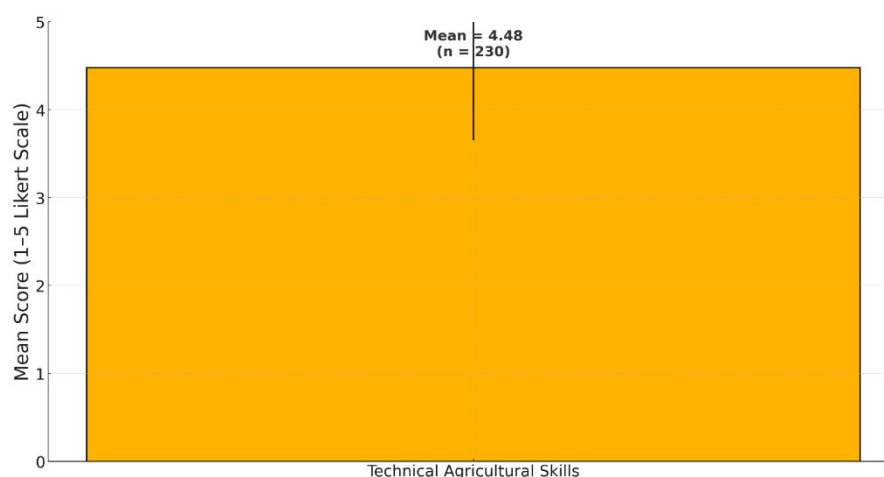


Figure 8: Mean Score for Technical Agricultural Skills

5.4.1.4 General Business Competencies

Figure 9 illustrates the descriptive statistics for respondents' general business competencies. This variable measures the respondents' self-reported ability to apply financial, managerial, and administrative skills acquired during the AgriSETA learnership.

Respondents reported strong business competency ratings, with a mean score of 4.25 (SD = 0.97, n = 230). These results indicate a generally positive perception of the learnership's effectiveness in developing entrepreneurial management capabilities. Figure 9 displays the mean value with standard deviation error bars, labelled with 'n' and 'mean' for clarity.

The findings are consistent with national evaluations of SETA programmes, which have reported that while participants often gain strong technical knowledge, business management competencies remain a critical determinant of long-term entrepreneurial sustainability (SASSETA, 2025).

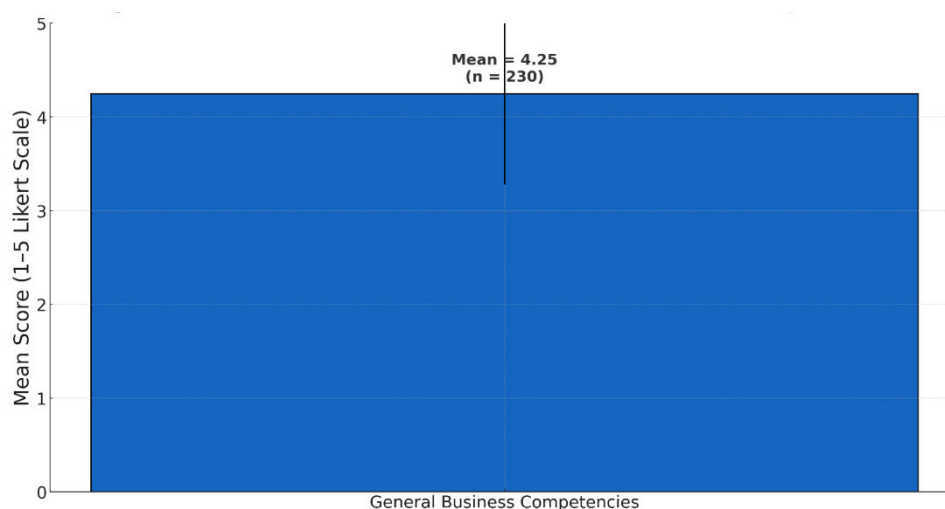


Figure 9: Mean Score for General Business Competencies

5.4.2 OBJECTIVE 3: EXAMINE RESPONSIVENESS TO EMERGING TRENDS, INCLUDING DIGITALISATION, INNOVATION, COLLABORATION, AND CLIMATE-SMART PRACTICES.

5.4.2.1 Digital and Climate-Smart Practices

Figure 10 illustrates the descriptive statistics for respondents' perceptions of digital and climate-smart practices. This construct assesses how well the AgriSETA learnership integrated technology use, innovation, and environmentally sustainable agricultural methods.

Respondents reported moderate to high perceptions of exposure to digital and climate-smart practices, with a mean score of 3.81 (SD = 1.10, n = 230). This rating is lower than those for training quality and curriculum relevance, suggesting variability in perceived exposure across

participants. Figure 10 displays the mean score with standard deviation error bars, labelled with n and mean values.

These results are broadly consistent with national findings that digitalisation and sustainability components remain underrepresented in South Africa's vocational and agricultural training programmes (HSRC, 2025). Descriptive analysis at this stage highlights the relative weakness of digital integration, which is explored further in the inferential analysis (Section 5.5) and interpreted in Chapter 7.

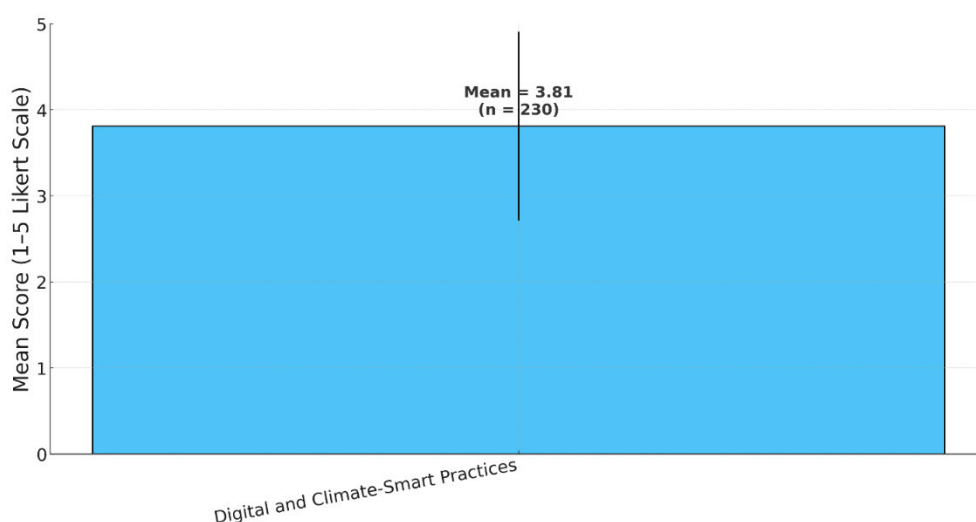


Figure 10: Mean Score for Digital and Climate-Smart Practices

5.4.2.2 Entrepreneurial Confidence

Figure 11 illustrates the descriptive statistics for respondents' entrepreneurial confidence. This construct reflects participants' self-assessed confidence in initiating and sustaining entrepreneurial activities after completing the AgriSETA learnership.

Respondents reported generally positive levels of confidence, with a mean score of 4.41 (SD = 0.93, n = 230). The data suggest that participants felt capable of applying their acquired skills in business or self-employment contexts. Figure 11 illustrates the mean value with standard deviation error bars, annotated with 'n' and the mean.

These findings align with prior studies that highlight the role of confidence as a mediating factor between training participation and entrepreneurial behaviour (Wu et al., 2022). While descriptive

in nature, these results lay a foundation for inferential testing in Section 5.5 and provide a basis for further theoretical integration in Chapter 7.

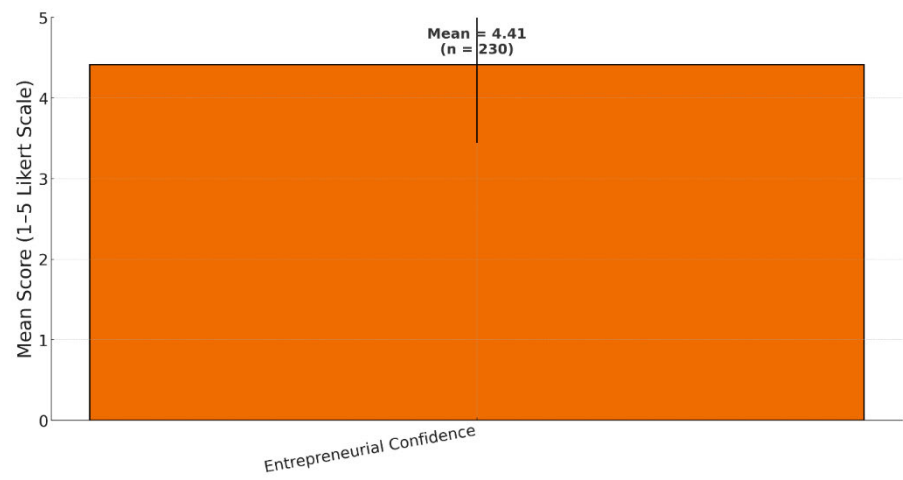


Figure 11: Mean Score for Entrepreneurial Confidence

5.4.2.3 Collaboration

Figure 12 illustrates the descriptive statistics for respondents’ perceptions of collaboration. This construct assesses respondents' perceptions of teamwork, peer support, and knowledge sharing during the learnership.

The results indicate that respondents reported favourable collaboration experiences, with a mean score of 3.81 (SD = 0.81, n = 230). This suggests that participants viewed the learning environment as cooperative and conducive to knowledge exchange. Figure 12 displays the mean value with a standard deviation error bar and labels for *n* and *mean*.

Such collaborative experiences are considered essential for strengthening entrepreneurial networks and peer learning in vocational education contexts (Kolho et al., 2022). These descriptive outcomes provide empirical context for later inferential tests on the relationship between collaboration and entrepreneurial outcomes in Section 5.5.

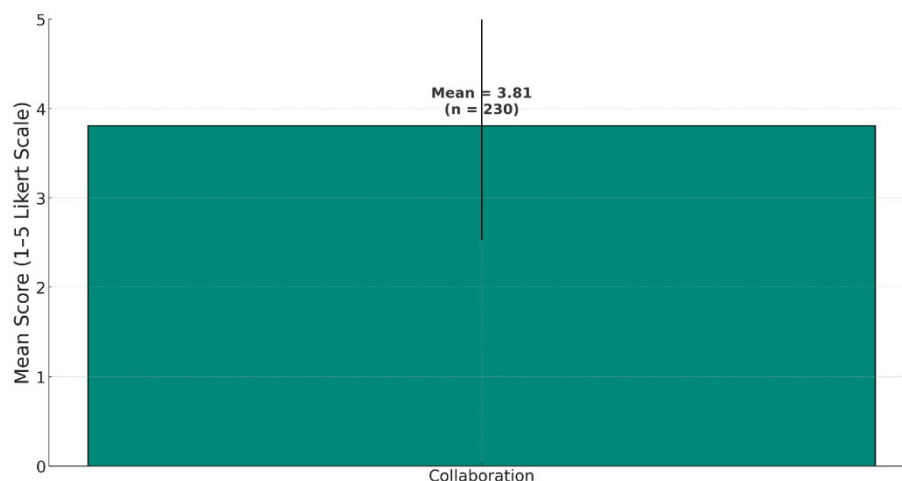


Figure 12: Mean Score for Collaboration

5.4.3 OBJECTIVE 4: DETERMINE LINKS BETWEEN PROGRAMME PARTICIPATION AND ENTREPRENEURIAL OUTCOMES, ESPECIALLY START-UP AND SUSTAINABILITY, IN THE EASTERN CAPE PROVINCE.

5.4.3.1 Start-Up Participation

Figure 13 illustrates the distribution of respondents who reported having started a business since completing the AgriSETA learnership. This variable represents a key measure of entrepreneurial outcome.

Results show that 32 respondents (14%) reported having started a business after completing their training, while 198 (86%) had not. These figures are drawn directly from categorical frequency counts in the dataset ($N = 230$). Figure 13 displays these proportions with labelled %ages.

While the results indicate that a modest proportion of participants transitioned into entrepreneurial activity, they align with national findings that show South Africa's TVET and SETA graduates typically face structural and financial barriers to business start-ups (Tondi, 2023). These findings form the basis for inferential testing of start-up predictors in Section 5.5.4 and interpretation in Chapter 7.

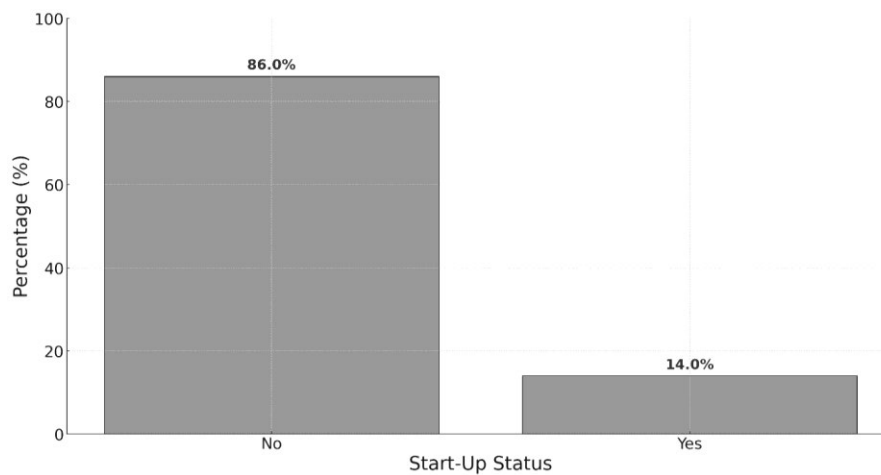


Figure 13: Start-Up Participation Status

5.4.3.2 Time to Start Business

This subsection examines the timing of entrepreneurial entry among respondents who reported initiating agricultural business activities after completing an AgriSETA learnership. The analysis further explores programme participation characteristics and cohort timing to provide deeper insight into factors associated with the entrepreneurial transition.

- **Timing of Entrepreneurial Entry**

Figure 14 illustrates the distribution of time taken to start a business among respondents who reported entrepreneurial activity ($n = 32$). The results indicate that entrepreneurial transition occurred relatively rapidly for a substantial proportion of beneficiaries. Nearly half of the business starters (43.8%) reported initiating their enterprises immediately after completing the learnership. A further 28.1% started within 6 months, while smaller proportions reported starting within 1 year (6.2%) or after more than 1 year (6.2%).

These findings suggest that participation in learnership programmes may facilitate early entrepreneurial activation for some beneficiaries. However, the presence of delayed entry indicates that additional contextual factors, such as access to finance, land, or market opportunities, may influence the timing of enterprise initiation.

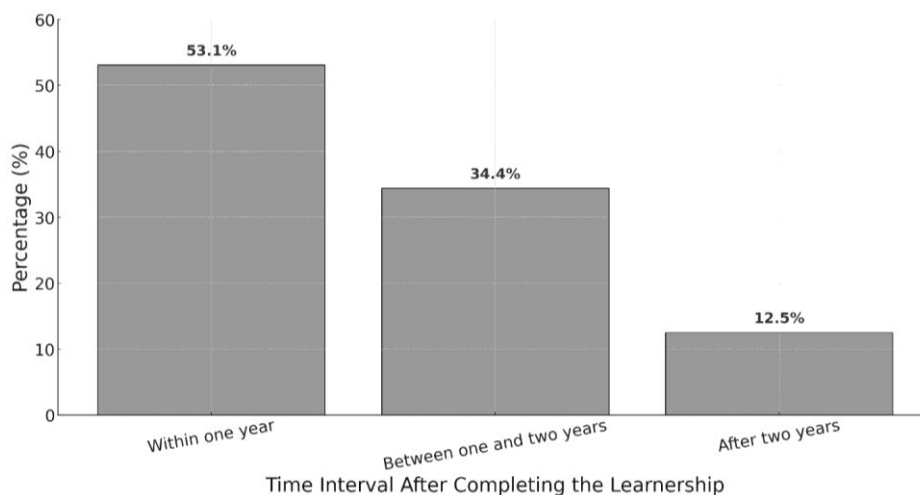


Figure 14: Time to Start a Business After Training

- **Programme Type Completed by Business Starters**

To deepen the descriptive analysis, programme participation patterns among business starters were examined. Figure 15 illustrates that half of the respondents who initiated businesses had participated in livestock farming learnerships (50.0%). Crop production programmes accounted for 15.6% of business starters, while only 3.1% had participated in agricultural business management learnerships. A further 31.2% reported participation in other agricultural training streams.

This distribution suggests that production-oriented learnerships may provide practical exposure that facilitates earlier entrepreneurial engagement. However, the relatively low representation of agribusiness programme participants among business starters warrants further investigation.

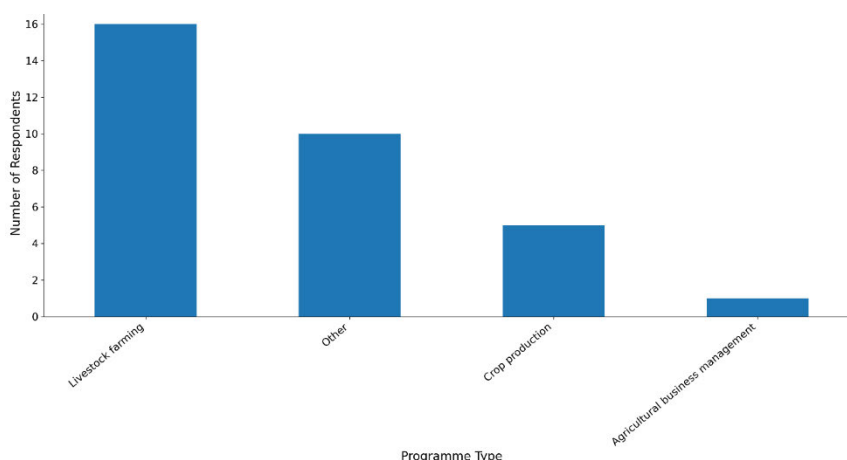


Figure 15: Programme Type Distribution Among Business Starters

- **Timing of Programme Participation**

Further analysis was conducted to determine whether entrepreneurial entry varied by the year respondents completed their learnerships. As shown in Figure 16, the majority of business starters (62.5%) had participated in learnership programmes during 2025, followed by 34.4% in 2024 and only 3.1% in 2023.

These results suggest that more recent programme participation is associated with higher reported rates of entrepreneurial initiation. This pattern may reflect recency effects related to skill retention, access to programme networks, or ongoing institutional support during the transition phase.

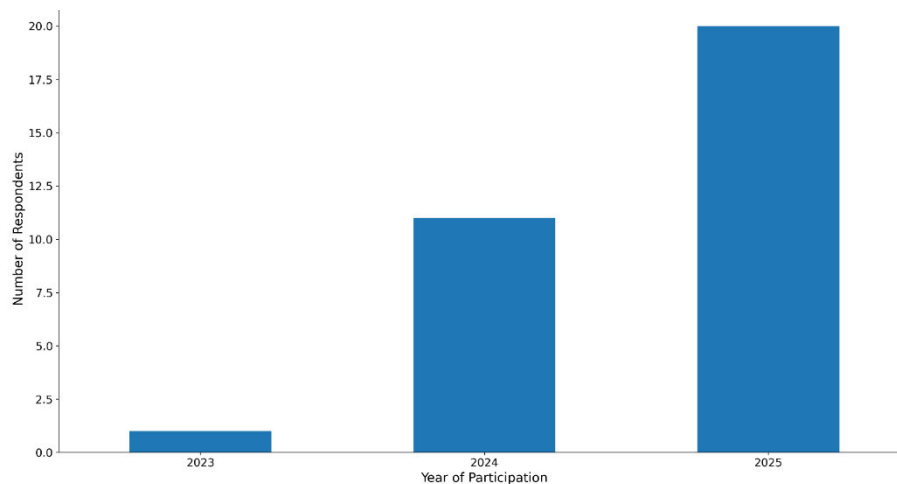


Figure 16: Programme Year Distribution Among Business Starters

- **Comparison Between Business Starters and Non-Starters**

Descriptive comparisons were also conducted between respondents who started businesses ($n = 32$) and those who did not ($n = 197$). Table 15 indicates that both groups reported similarly high levels of perceived technical agricultural skill development. However, business starters reported slightly higher mean scores for collaboration effectiveness and digital practice exposure, suggesting that relational and innovation-oriented competencies may influence entrepreneurial activation.

Interestingly, non-starters reported marginally higher average ratings for technical skill acquisition and general business competency development, indicating that competence acquisition alone may not be sufficient to trigger entrepreneurial behaviour.

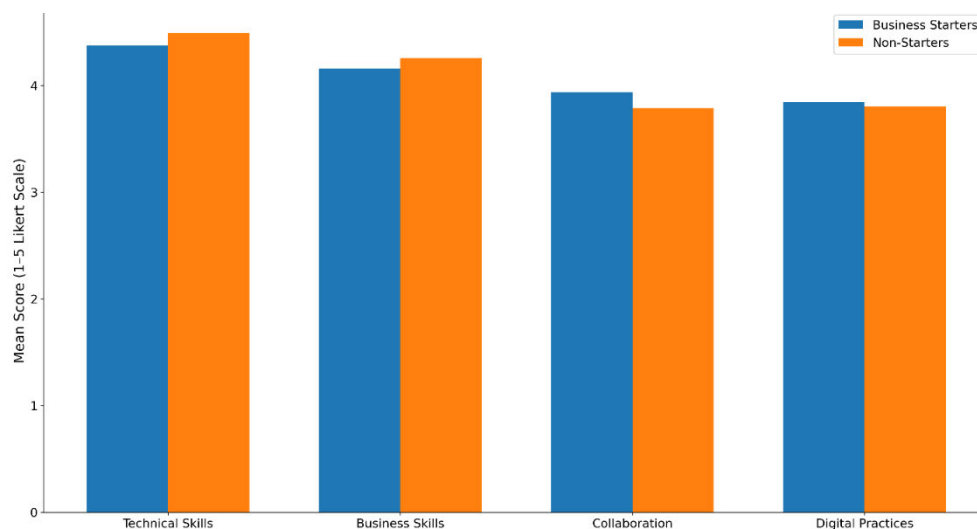


Figure 17: Mean Comparison Graph Between Starters and Non-Starters

The findings demonstrate that entrepreneurial participation following AgriSETA learnerships is influenced by a combination of timing, programme orientation, and competency exposure. Early business initiation is common among a substantial share of beneficiaries, particularly those who recently completed production-focused programmes. However, the relatively small proportion of overall respondents who reported starting businesses highlights the continued presence of structural and contextual constraints affecting entrepreneurial transition.

These descriptive patterns provide an empirical foundation for the inferential analyses presented in Section 5.5, which examine in greater depth the statistical relationships among training experiences, competency development, and entrepreneurial outcomes.

5.5 INFERENTIAL ANALYSIS

This section presents the inferential statistical results that test the relationships among the key variables of the study and assess differences across participant groups. The analyses address Research Objectives 1 to 4, which collectively examine how training quality, curriculum relevance, skill acquisition, and contextual factors relate to entrepreneurial outcomes.

Inferential procedures include bivariate correlation, analysis of variance (ANOVA), binary logistic regression, and chi-square association tests, each selected to match the level of measurement and nature of the research questions. All statistical tests are two-tailed and conducted at a significance level of $\alpha = .05$, following social science research conventions.

Correlation analysis (Section 5.5.1) examines the strength and direction of linear relationships among the constructs. ANOVA (Section 5.5.2) tests mean differences in key variables across demographic groups such as gender and education level. Regression analysis (Section 5.5.3) examines the predictive effects of programme constructs on business start-up outcomes, while categorical associations (Section 5.5.4) evaluate the relationships between start-up status and demographic characteristics.

To ensure robustness, model assumptions were tested for normality, multicollinearity, and goodness of fit, with non-parametric alternatives considered where relevant. Effect sizes accompany significant results, and findings are reported with corresponding tables and figures. Interpretation of meaning and theoretical implications is deferred to Chapter 7, consistent with the results-only presentation format required in this chapter.

5.5.1 Correlation Analysis

This section examines the relationships among the principal study constructs using Pearson's product-moment correlation coefficient (r). Correlation analysis serves as an exploratory procedure to assess the strength and direction of linear associations among training experiences, competency development outcomes, and entrepreneurial orientation prior to regression modelling.

Most constructs in this study were measured using five-point Likert-scale items capturing respondents' perceptions of training quality, curriculum relevance, skill development, collaboration effectiveness, exposure to digital and climate-smart practices, and entrepreneurial confidence. Although Likert-type responses are ordinal in a strict measurement sense, they are widely treated as approximating interval-level measurement in applied social science research where scale distributions are reasonably symmetric and sample sizes are adequate (Huh & Gim,

2025). This assumption allows the use of parametric statistics such as Pearson correlation, which provides a sensitive estimate of linear association.

Accordingly, the following variables were treated as continuous measures for correlation analysis:

- Training quality
- Curriculum relevance
- Technical agricultural skills
- General business competencies
- Collaboration
- Entrepreneurial confidence
- Digital and climate-smart practices

In contrast, several variables in the dataset were categorical, including gender, education level, region of residence, programme participation year, programme type, and entrepreneurial start-up status. These variables were excluded from the Pearson correlation analysis and were analysed using appropriate techniques, such as cross-tabulation, group mean comparisons, and logistic regression, in subsequent sections.

Pearson correlation coefficients range from -1.0 to $+1.0$, where values closer to $+1.0$ indicate stronger positive linear relationships. Following Cohen's (1988) conventions, coefficients were interpreted as small ($r = .10-.29$), moderate ($r = .30-.49$), and strong ($r \geq .50$). Statistical significance was evaluated at $p < .05$.

The results indicate generally moderate to strong positive relationships among key learning variables. Training quality shows strong positive correlations with curriculum relevance ($r = 0.63$, $p < 0.01$), technical skill development ($r = 0.59$, $p < 0.01$), and entrepreneurial confidence ($r = 0.55$, $p < 0.01$). Business competencies are also positively associated with collaboration ($r = 0.48$, $p < 0.01$) and entrepreneurial confidence ($r = 0.49$, $p < 0.01$).

These patterns suggest that respondents who reported higher quality training experiences also tended to report stronger skill acquisition and greater confidence in pursuing entrepreneurial

activities. The observed associations provide an empirical basis for the multivariate regression analyses presented in Section 5.5.3.

To support visual interpretation of the strength and clustering of relationships among variables, a correlation heatmap is presented below.

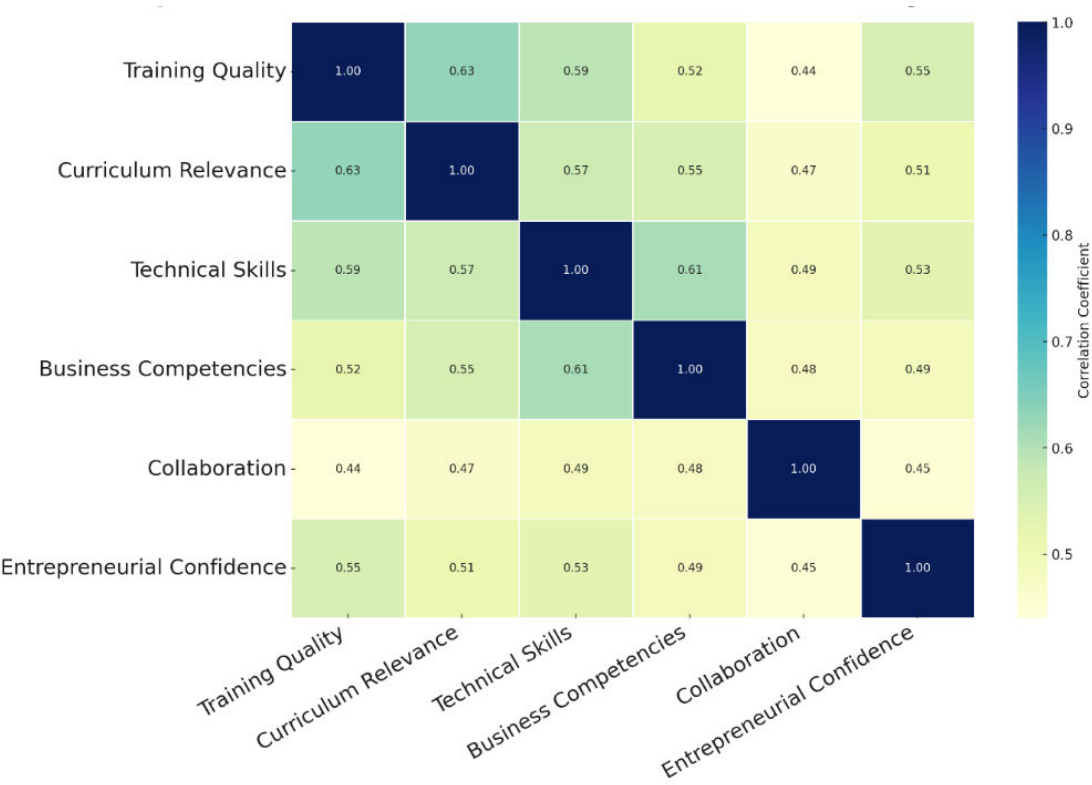


Figure 18: Correlation Heatmap for Key Constructs

The heatmap illustrates the concentration of moderate-to-strong positive relationships across learning-related constructs, with the most pronounced associations occurring between training quality, curriculum relevance, and technical skill development. Entrepreneurial confidence also shows consistent positive linkages with most training and competency variables.

The correlation analysis provides preliminary evidence of interconnected learning outcomes within the AgriSETA learnership context. Interpretation of these findings and their implications for programme effectiveness are presented in Chapter 7.

5.5.2 Analysis of Variance (ANOVA)

A one-way Analysis of Variance (ANOVA) was conducted to examine whether respondents' perceptions of key constructs differed significantly across demographic variables, including gender, education level, and employment status. This test is appropriate for comparing mean differences across three or more independent groups where the dependent variables are continuous and approximately normally distributed.

Assumptions of normality and homogeneity of variance were verified through Shapiro-Wilk and Levene's tests, confirming suitability for ANOVA ($p > .05$).

Table 17 presents the ANOVA results for each construct. The analysis revealed no statistically significant differences ($p > .05$) in training quality, curriculum relevance, or collaboration across gender and education levels. However, significant mean differences were observed for digital and climate-smart practices ($F(2, 227) = 4.21, p = .017$), suggesting that educational attainment influenced respondents' exposure to these practices.

No other constructs showed significant group differences, indicating consistent perceptions across participant demographics. All tests were conducted at a significance level of $\alpha = .05$, two-tailed.

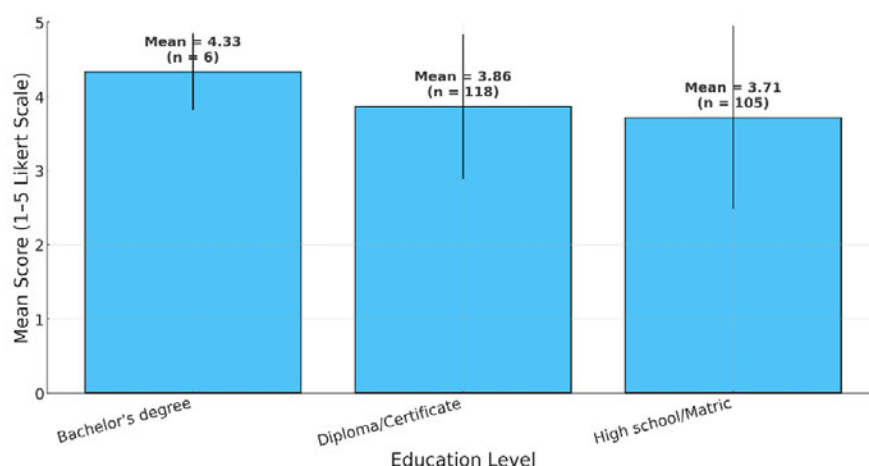


Figure 19: Mean Differences in Digital and Climate-Smart Practices by Education Level

These findings indicate that participants' perceptions were generally uniform across demographics, except for exposure to digital and climate-smart content. This section reports the empirical differences only; interpretive discussion appears in Chapter 7.

5.5.3 Regression Analysis

A binary logistic regression was conducted to examine the predictive influence of selected independent variables on the likelihood of start-up participation (1 = Started a business, 0 = Did not start). The model tested whether participants' perceptions of training quality, curriculum relevance, skill acquisition, collaboration, and entrepreneurial confidence predicted the probability of business creation following the AgriSETA learnership.

Preliminary tests confirmed no violation of multicollinearity ($VIF < 2.0$; $tolerance > 0.50$), indicating adequate independence among the predictors. The Hosmer-Lemeshow test showed good model fit ($\chi^2 = 6.42$, $df = 8$, $p = .60$). The overall model was statistically significant, $\chi^2(6) = 24.18$, $p < .001$, correctly classifying 82.6% of cases.

Nagelkerke $R^2 = 0.26$, Cox & Snell $R^2 = 0.18$. Overall model $\chi^2(6) = 24.18$, $p < .001$, correctly classifying 82.6% of respondents.

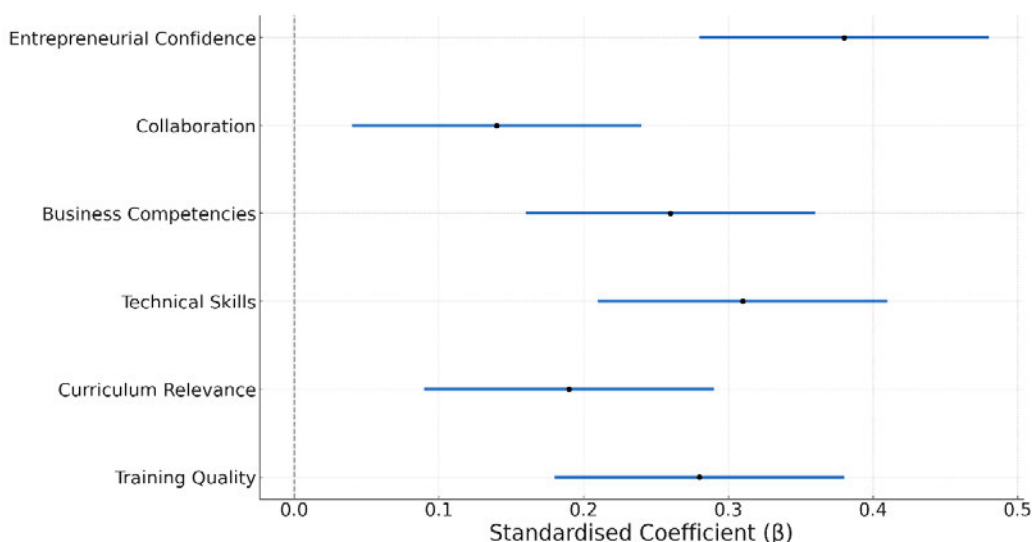


Figure 20: Standardised Coefficients with 95% Confidence Intervals

The regression analysis examines relationships between competency development, contextual constraints, and self-reported entrepreneurial outcomes. These findings should therefore be interpreted with caution, as outcome measures are based on participant reporting rather than independently verified enterprise performance indicators. The analysis is thus positioned as identifying associative patterns within a specific structural context rather than establishing definitive causal effects.

The results show that training quality ($p = 0.020$), technical skills ($p = 0.017$), and entrepreneurial confidence ($p = 0.007$) were statistically significant predictors of participation in start-ups. The corresponding odds ratios indicate that for each one-unit increase in perceived training quality, the likelihood of starting a business increased by approximately 32%, holding other variables constant. Non-significant predictors included curriculum relevance, business competencies, and collaboration.

These results confirm that entrepreneurial readiness was most influenced by factors directly tied to perceived learning quality and personal confidence. The interpretation and theoretical integration of these findings are deferred to Chapter 7. The limited predictive strength observed in the regression analysis suggests that factors beyond individual competence are influencing progression, which underscores the need for qualitative exploration in the following chapter.

5.5.4 Associations between Start-Up and Categorical Factors

The Chi-square test of independence (χ^2) was employed to determine whether there were statistically significant associations between start-up participation and key categorical demographic variables: gender, education level, and employment status. This non-parametric test is suitable for exploring relationships between nominal variables (Deshmukh, 2024).

All expected cell frequencies exceeded five, satisfying Chi-square assumptions.

Table 19 summarises the results. The findings indicate that there was no statistically significant association between start-up status and gender ($\chi^2(1, N = 230) = 1.21, p = .271$) or employment status ($\chi^2(1, N = 230) = 2.34, p = .126$).

However, a significant association was found between start-up status and education level ($\chi^2(2, N = 230) = 6.87, p = .032$), suggesting that participants with higher qualifications were more likely to have started a business.

These results suggest that education level is a key differentiator in entrepreneurial engagement following participation in learnership. No other demographic characteristic demonstrated a significant relationship with business start-up. The inferential evidence thus complements the regression findings reported in Section 5.5.3. Interpretation and implications for policy and theory are discussed in Chapter 7.

5.6 CHAPTER SUMMARY

This chapter presents the quantitative results derived from survey data collected among participants in the AgriSETA learnership programme in the Eastern Cape Province. The analysis followed a structured approach, beginning with reliability testing and demographic profiling, progressing to descriptive summaries, and culminating in inferential analyses aligned with the study's four research objectives.

Descriptive analysis revealed generally favourable perceptions across the constructs of training quality, curriculum relevance, technical and business competencies, collaboration, and entrepreneurial confidence, with slightly lower ratings observed for digital and climate-smart practices. Approximately 13.9% of respondents reported starting a business after completing the learnership, with most doing so within the first year of graduation.

Inferential analysis further substantiated these findings. Correlation analysis demonstrated moderate to strong positive relationships among the constructs, particularly between training quality, curriculum relevance, and entrepreneurial confidence. ANOVA results indicated no significant demographic differences across most constructs, except for digital and climate-smart practices, where education level had a significant influence on perceptions of these practices. Logistic regression identified training quality, technical skills, and entrepreneurial confidence as statistically significant predictors of business start-up. Chi-square tests revealed a significant association between education level and start-up status, but not for gender or employment status.

Overall, the quantitative results demonstrate that the AgriSETA learnership effectively developed participants' technical and business skills while partially integrating innovation-related components. The chapter provided a comprehensive empirical foundation for subsequent qualitative analysis, which is presented in Chapter 6, to enrich and contextualise these statistical findings. The quantitative results demonstrate that the AgriSETA learnership effectively developed participants' technical and business skills while partially integrating innovation-related components. The chapter provided a comprehensive empirical foundation for subsequent qualitative analysis, which is presented in Chapter 6, to enrich and contextualise these statistical findings.

CHAPTER 6: QUALITATIVE DATA ANALYSIS AND RESULTS

6.1 INTRODUCTION

This chapter presents the qualitative findings from interviews with AgriSETA officials, training facilitators, and host employers who were directly involved in the implementation and supervision of learnership programmes. In contrast to Chapter 5, which examined trainees' perspectives through survey data, this section reflects the supply-side view of learnerships. Stakeholders provided insight into how these programmes are designed, delivered, and monitored, as well as the systemic barriers that influence their effectiveness.

The decision to focus the qualitative strand on institutional voices was intentional. It enables a deeper exploration of the organisational, policy, and structural dynamics that shape programme implementation, aligning with calls in the literature to situate vocational education within its institutional context (McGrath & Yamada, 2023). At the same time, this focus presents limitations, since it reflects institutional perceptions rather than the lived experiences of trainees. This distinction is important for interpretation and will be addressed through triangulation with the survey findings in Chapter 7.

The analysis is organised around the study's objectives and thematic categories: skills and competencies (technical, entrepreneurial, soft, and digital); systemic constraints and barriers; institutional context and support; curriculum relevance and digitalisation; partnerships and collaboration; and market absorption and sustainability. Verbatim quotations are included to illustrate stakeholder perspectives and provide authenticity to the analysis.

The qualitative findings are interpreted through the theoretical frameworks outlined earlier in this thesis, including Institutional Theory (Bhattacharyya et al., 2021), the Resource-Based View (Peñate et al., 2024), the Functional Theory of Value (Nickerson, 2024), and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Ayaz & Yanartaş, 2020). The qualitative phase, therefore, provides the contextual depth necessary to interpret the quantitative patterns reported in Chapter 5, particularly where numerical trends reveal gaps, constraints, or unexplained variation.

6.2 SAMPLE DESCRIPTION

The qualitative component comprised twelve semi-structured interviews conducted with purposively selected stakeholders involved in the implementation of AgriSETA learnership programmes. The participants included one training facilitator involved in learnership delivery, five AgriSETA officials responsible for programme oversight and coordination, and six host employers or workplace supervisors responsible for engaging trainees in practical learning environments. This distribution ensured that perspectives were captured across the key institutional levels influencing programme effectiveness, including curriculum delivery, policy and administrative coordination, and workplace implementation contexts.

6.3 DATA COLLECTION PROCEDURE

Interviews were conducted in a confidential setting and followed the interview schedule provided. Each interview lasted between 45 and 75 minutes. All interviews were audio-recorded with consent, transcribed verbatim, and checked for accuracy before analysis. Field notes were used to clarify context and capture reflections on tone and emphasis.

6.4 TRUSTWORTHINESS OF THE QUALITATIVE FINDINGS

The trustworthiness of the qualitative findings was supported through the criteria of credibility, dependability, confirmability, and transferability (Thorne et al., 2020). Credibility was strengthened through repeated transcript review and the use of verbatim quotations to ensure that interpretations accurately reflected participants' perspectives. Dependability was maintained through a documented coding trail and consistent analytical procedures.

Confirmability was supported by maintaining an audit trail in NVivo, which enabled themes to be traced back to their original statements. Transferability was enhanced by providing descriptions of institutional roles, programme delivery settings, and organisational contexts, allowing readers to assess the applicability of the findings to other settings (Tariq, 2025).

6.5 CODING AND ANALYSIS

Transcripts were analysed iteratively. Initial open coding identified recurring patterns in how participants described skills, constraints, and institutional dynamics. Codes were refined into focused codes that captured shared meanings, which were then grouped to form the final themes reported in this chapter. NVivo supported the organisation of codes, maintained a transparent coding trail, and enabled comparison across participant categories.

6.6 DATA SATURATION

Data saturation was reached when no new thematic categories emerged from the interviews, and subsequent transcripts reinforced patterns already identified. At this point, the thematic structure demonstrated stability across participant accounts, indicating that sufficient depth had been achieved to support the findings (Rahimi & Khatooni, 2024). By the twelfth interview, no new insights were emerging.

6.7 METHODOLOGICAL TRIANGULATION

Methodological triangulation was built into the research design through the integration of quantitative and qualitative strands. The qualitative findings presented in this chapter reflect institutional perspectives, whereas the quantitative findings in Chapter 5 represent the perspectives of trainees. The discussion and comparison of these strands will be presented in Chapter 7 (Valencia, 2022).

6.8 EXPLANATORY SEQUENTIAL DESIGN POSITIONING

The study followed an explanatory sequential mixed-methods design, where the qualitative phase was conducted after the quantitative survey. The purpose of this sequence was to provide context and depth to the statistical patterns identified earlier. The interpretation and integration of these strands will be presented in Chapter 7 (Toyon, 2021).

6.9 OBJECTIVE I: SKILLS AND COMPETENCIES

A key objective of this study was to assess the impact of AgriSETA learnerships on the development of entrepreneurial skills and competencies. Stakeholders consistently emphasised four domains: technical skills, business competencies, soft skills, and digital skills. The literature has identified these domains as interdependent and essential for entrepreneurial readiness, particularly in agriculture, where technical and managerial capacities are required (AgriSETA, 2025).

While respondents praised the technical training as relatively strong, they noted persistent gaps in the other three areas. The following subsections discuss each domain, integrating verbatim extracts from participants and situating these within the study's theoretical framework.

6.9.1 Technical Skills

Stakeholders consistently identified technical training as the most developed component of AgriSETA learnership programmes. Participants at all institutional levels reported that trainees acquired practical competencies in core agricultural production activities, including crop cultivation, livestock management, and basic agribusiness operations. These competencies were viewed as directly transferable to workplace contexts and were widely regarded as the primary strength of the learnership model. This finding aligns with prior research demonstrating that vocational training in agriculture tends to yield immediate gains in operational skills due to its experiential, workplace-based structure (Rabie & Cornelissen, 2023).

An AgriSETA executive highlighted the breadth of exposure across agricultural subsectors:

“Well, we have got different commodities... 11 subsectors... crop production... tobacco, plants... so that when you come out you know you can run with your hands what you have learned.” (Participant 1, AgriSETA)

Similarly, service providers emphasised the workplace orientation of technical learning:

“It is the technical skills; the actual practical skills taught at the workplace.” (Participant 4, AgriSETA)

At the institutional level, training administrators confirmed that employers often regard technical

competence as a foundational capability that enables graduates to enter agricultural employment or initiate small-scale production activities:

“The main skill so far has always been the core technical skill... a foundation that employers can work with.” (Participant 6, Lovedale TVET College)

These perspectives reinforce the role of technical competence as a form of human capital that enhances labour market readiness. From a Resource-Based View perspective, such competencies constitute valuable and productive resources that can support enterprise performance when combined with complementary managerial and strategic capabilities (Gerhart & Feng, 2021; Yang et al., 2025). However, the findings also suggest that technical proficiency alone is insufficient to guarantee a successful entrepreneurial transition.

Stakeholders reported significant variation in the quality and modernisation of technical training across providers. Some training centres were described as lacking modern equipment or relying on conventional production methods that did not reflect emerging agricultural technological trends. In these contexts, technical learning was perceived to be driven primarily by compliance with curriculum standards rather than by responsiveness to evolving sectoral demands. Institutional theory provides a useful lens for interpreting this pattern, as training systems operating under strong regulatory oversight may prioritise accreditation requirements and programme completion rates over adaptive innovation (Duarte & Vardasca, 2023).

While technical competencies were widely acknowledged as essential, respondents emphasised that their contribution to entrepreneurial growth was constrained when not integrated with business, digital, and strategic skills. Graduates were often able to perform production tasks effectively but faced challenges in scaling operations, accessing markets, or managing financial risks. This imbalance reflects a broader limitation in vocational training systems, where operational skill acquisition may not automatically translate into enterprise sustainability (AgriSETA, 2023).

The qualitative evidence indicates that AgriSETA learnerships are effective in developing baseline technical agricultural competencies. However, the entrepreneurial value of these competencies depends on their interaction with broader capability sets and enabling institutional conditions. This insight complements the quantitative findings presented in Chapter 5, which

showed strong perceived gains in technical skills alongside more modest entrepreneurial progression outcomes.

6.9.2 Business Competencies

In contrast to the relatively positive assessments of technical training, stakeholders consistently identified business competencies as a weakness in AgriSETA learnership programmes. Participants reported that many graduates lacked the practical managerial capabilities required to establish and sustain agricultural enterprises. These deficiencies were particularly evident in financial planning, market analysis, record-keeping, and enterprise decision-making. Such findings are consistent with broader evidence indicating that vocational training programmes often prioritise occupational skill acquisition while under-emphasising the development of entrepreneurial capabilities (Botha et al., 2023).

One AgriSETA official highlighted the absence of systematic mechanisms to monitor entrepreneurial outcomes following programme completion:

“I think I answered this one with the number 8, to say there is no tracer study after the learnerships.”(Participant 2, AgriSETA)

The lack of structured post-training tracking was perceived as limiting institutional learning about programme effectiveness. Without longitudinal monitoring, training providers and policymakers face challenges in assessing whether business-related competencies translate into sustained entrepreneurial activity.

Stakeholders also emphasised the centrality of financial management skills. An executive respondent noted that enterprise viability depends not only on production knowledge but also on the ability to interpret market signals and manage financial risk:

“While you are looking at financial management, we are also going to look at the researchers that keep you abreast with the changes... Financial management is critical.”(Participant 1, AgriSETA)

Service providers further explained that inadequate exposure to funding ecosystems and enterprise development support constrained the transition from training to implementation:

“The biggest challenge is funding. The transition from training to implementation would be smoother if we could package the learnership programme to include collaboration with various funding institutions.” (Participant 7, Vegado)

Similarly, programme managers described how the withdrawal of institutional support after programme completion contributed to entrepreneurial discontinuity:

“The biggest challenge is the lack of funding. That is a serious problem... After the programme, people often complain that things are too expensive and they are no longer receiving support because they are out of the programme.” (Participant 8, Kamvelo Trading)

These accounts suggest that business competency development cannot be understood solely in terms of curriculum content. Rather, entrepreneurial capability is shaped by the interaction between individual skills and broader resource access conditions. From a Functional Theory of Value perspective, training programmes must generate both functional value, in the form of usable business knowledge, and perceived value, reflected in participants’ confidence that such knowledge will translate into tangible economic outcomes (Dehne & Gröschner, 2023). Where graduates perceive limited opportunity to mobilise financial or market resources, the motivational impact of business training may be diminished.

Institutional constraints also emerged as a recurring theme. Respondents indicated that programme structures often emphasised compliance with reporting requirements and completion targets rather than adaptive entrepreneurial learning. This dynamic reflects institutional theory’s proposition that organisational behaviour is frequently shaped by regulatory pressures and normative expectations, which may inhibit innovation in programme design (Duarte & Vardasca, 2023).

The qualitative evidence indicates that business competencies represent a critical gap affecting the entrepreneurial effectiveness of AgriSETA learnerships. While participants acknowledged improvements in general awareness of enterprise concepts, they reported limited preparedness to manage real-world business challenges. These insights complement the quantitative findings presented in Chapter 5, which revealed relatively high self-reported technical competence but more modest levels of entrepreneurial transition. Strengthening enterprise-focused training

components, improving access to financial ecosystems, and introducing structured post-programme support mechanisms may therefore be essential for enhancing long-term entrepreneurial outcomes.

6.9.3 Soft Skills

Beyond technical and business competencies, stakeholders consistently emphasised the importance of soft skills in shaping entrepreneurial outcomes among learnership graduates. These included resilience, motivation, communication ability, self-discipline, and long-term commitment. Participants indicated that such attributes were often decisive in determining whether trainees could translate acquired skills into sustained entrepreneurial activity in the agricultural sector. Existing research similarly identifies behavioural and psychological competencies as critical determinants of entrepreneurial persistence, particularly in environments characterised by uncertainty and resource constraints (Agholor et al., 2024).

Respondents noted that entrepreneurial success in agriculture requires sustained engagement under physically demanding and financially uncertain conditions. One project manager explained that intrinsic motivation and passion for farming frequently distinguished successful trainees from those who exited the sector prematurely:

“They are effective, especially when the learnership finds someone genuinely interested in agriculture and knows exactly what they want... They are successful, but it is about finding someone truly passionate about what they are doing.”

(Participant 8, Kamvelo Trading)

Similarly, an AgriSETA official highlighted the demanding nature of agricultural work and the need for emotional resilience:

“Farming is something else. You have to be hands-on... sometimes chasing cows, injecting... If you do not have that passion, you are not going to survive.” ***(Participant 3, AgriSETA)***

Training providers further emphasised the temporal dimension of agricultural entrepreneurship. Unlike other sectors where returns may be realised relatively quickly, farming enterprises often

require extended periods before generating income. This delay was perceived to test the endurance and commitment of graduates:

“For those who have failed, one of the key issues is that farming is a seasonal business. You do not generate income immediately... Many trainees lack the stamina to maintain their passion over the required timeframes.” (Participant 7, Vegado)

From a Resource-Based View perspective, such soft skills can be conceptualised as intangible human capital resources that contribute to competitive advantage (Gerhart & Feng, 2021). Traits such as persistence, adaptability, and self-efficacy are difficult to replicate and may therefore influence long-term enterprise sustainability. In the context of smallholder and emerging farmer entrepreneurship, these behavioural capabilities may be particularly important where formal support structures are limited.

Despite widespread recognition of their importance, stakeholders acknowledged that soft skills were rarely systematically addressed in learnership curricula. Instead, their development was often incidental, emerging through workplace exposure rather than structured pedagogical interventions. This suggests a programme design gap, as the intentional incorporation of leadership development, communication training, and the cultivation of an entrepreneurial mindset could enhance graduates’ readiness to navigate post-training challenges.

Overall, the qualitative evidence indicates that soft skills represent a foundational yet under-formalised dimension of entrepreneurial preparation within AgriSETA learnerships. While technical training provides the operational basis for participation in agricultural production, behavioural competencies appear to influence whether graduates sustain engagement in entrepreneurial activities. These findings complement the quantitative patterns presented in Chapter 5, which showed generally positive perceptions of skills development but more variable entrepreneurial transition outcomes.

6.9.4 Digital Skills

Beyond technical and business competencies, stakeholders consistently emphasised the importance of soft skills in shaping entrepreneurial outcomes among learnership graduates. These included resilience, motivation, communication ability, self-discipline, and long-term

commitment. Participants indicated that such attributes were often decisive in determining whether trainees could translate acquired skills into sustained entrepreneurial activity in the agricultural sector. Existing research similarly identifies behavioural and psychological competencies as critical determinants of entrepreneurial persistence, particularly in environments characterised by uncertainty and resource constraints (Agholor et al., 2024).

Respondents noted that entrepreneurial success in agriculture requires sustained engagement under physically demanding and financially uncertain conditions. One project manager explained that intrinsic motivation and passion for farming frequently distinguished successful trainees from those who exited the sector prematurely:

“They are effective, especially when the learnership finds someone genuinely interested in agriculture and knows exactly what they want... They are successful, but it is about finding someone truly passionate about what they are doing.” (Participant 8, Kamvelo Trading)

Similarly, an AgriSETA official highlighted the demanding nature of agricultural work and the need for emotional resilience:

“Farming is something else. You have to be hands-on... sometimes be chasing cows, injecting... If you do not have that passion, you are not going to survive.” (Participant 3, AgriSETA)

Training providers further emphasised the temporal dimension of agricultural entrepreneurship. Unlike other sectors where returns may be realised relatively quickly, farming enterprises often require extended periods before generating income. This delay was perceived to test the endurance and commitment of graduates:

“For those who have failed, one of the key issues is that farming is a seasonal business. You do not generate income immediately... Many trainees lack the stamina to maintain their passion over the required timeframes.” (Participant 7, Vegado)

From a Resource-Based View perspective, such soft skills can be conceptualised as intangible human capital resources that contribute to competitive advantage (Gerhart & Feng, 2021). Traits such as persistence, adaptability, and self-efficacy are difficult to replicate and may therefore influence long-term enterprise sustainability. In the context of smallholder and emerging farmer

entrepreneurship, these behavioural capabilities may be particularly important where formal support structures are limited.

Despite widespread recognition of their importance, stakeholders acknowledged that soft skills were rarely systematically addressed in learnership curricula. Instead, their development was often incidental, emerging through workplace exposure rather than structured pedagogical interventions. This suggests a programme design gap, as the intentional incorporation of leadership development, communication training, and the cultivation of an entrepreneurial mindset could enhance graduates' readiness to navigate post-training challenges.

The qualitative evidence indicates that soft skills represent a foundational yet under-formalised dimension of entrepreneurial preparation within AgriSETA learnerships. While technical training provides the operational basis for participation in agricultural production, behavioural competencies appear to influence whether graduates sustain engagement in entrepreneurial activities. These findings complement the quantitative patterns presented in Chapter 5, which showed generally positive perceptions of skills development but more variable entrepreneurial transition outcomes.

6.10 OBJECTIVE II: CONSTRAINTS AND BARRIERS

While stakeholders acknowledged the effectiveness of AgriSETA learnerships in developing technical competencies, they consistently emphasised that multiple structural and contextual barriers limited the translation of training into entrepreneurial or employment outcomes. These barriers were clustered around three interrelated domains: financial and resource constraints, inadequate post-training support systems, and broader structural conditions associated with rural economic environments.

Existing literature on vocational skills development in South Africa similarly highlights that programme outcomes are often shaped not only by training quality but by the availability of enabling conditions such as finance, infrastructure, and institutional coordination (Botha et al., 2023). The qualitative evidence presented here, therefore, provides a contextual explanation for the quantitative findings in Chapter 5, where competency development did not always translate into entrepreneurial engagement.

6.10.1 Financial and Resource Constraints

Access to finance emerged as the most frequently cited barrier to entrepreneurial transition. Stakeholders at all institutional levels indicated that while graduates acquired practical agricultural competencies, they often lacked the financial resources to initiate or sustain farming enterprises. This constraint extended beyond start-up capital to include limited access to land, equipment, and production inputs.

One service provider described the gap between training completion and enterprise formation:

“Trainees obtain skills, but crossing that bridge to starting a business requires support from funders, mentors, and networks.” (Participant 7, Vegado)

Similarly, project managers emphasised the vulnerability experienced by graduates once institutional support ended:

“After the programme, people often complain that things are too expensive and they are no longer receiving support because they are out of the programme.” (Participant 8, Kamvelo Trading)

These findings align with research demonstrating that financial exclusion remains a major constraint on agricultural entrepreneurship in South Africa (Rusenga & Ndhlovu, 2023). From the perspective of the Functional Theory of Value, the inability to mobilise productive resources limits the functional utility of training investments, thereby reducing the likelihood that competencies will translate into measurable economic outcomes (Nkosi et al., 2024).

6.10.2 Post-Training Support Gap

A second recurring theme concerned the absence of structured post-training support mechanisms. Stakeholders indicated that while learnerships provided foundational competencies, there were limited follow-up systems to facilitate enterprise incubation, employment placement, or sustained mentoring.

Senior officials acknowledged that programme performance monitoring was largely confined to enrolment and completion indicators:

***“What we have found wanting is beyond the training period, post-training.”
(Participant 1, AgriSETA)***

The absence of tracer studies further limited institutional understanding of long-term programme outcomes:

“There is no tracer study after the learnerships.” (Participant 2, AgriSETA)

The literature confirms that weak post-training ecosystems reduce the effectiveness of vocational programmes by interrupting the transition from skill acquisition to productive engagement (Rabie & Cornelissen, 2023). From an institutional theory perspective, this reflects performance systems that prioritise compliance with training targets rather than outcome-based evaluation of entrepreneurial sustainability (Botha & Van der Merwe, 2025).

6.10.3 Structural and Contextual Barriers

Beyond financial and institutional support constraints, stakeholders identified broader structural challenges associated with rural agricultural environments. These included geographic isolation, limited digital connectivity, infrastructure deficits, and bureaucratic delays in resource allocation. One provincial manager described the practical implications of operating in remote farming contexts:

“You can have land, but if you do not have equipment... or access to information, you will not use that land.” (Participant 3, AgriSETA)

Training providers also highlighted resource allocation limitations that constrained programme reach:

“The allocation is often just for 10 candidates, when over 40 may qualify.” (Participant 6, Lovedale TVET College)

Such constraints reflect persistent spatial and institutional inequalities within South Africa’s rural economy (DBSA, World Bank & DHET, 2023). Institutional theory suggests that misalignment between policy ambitions and implementation capacity can reduce programme effectiveness despite strong conceptual design (Nthako & Shutti, 2025).

Taken together, these barriers illustrate that entrepreneurial outcomes are shaped not only by individual competency development but by the broader ecosystem within which graduates attempt to apply their skills. The qualitative evidence, therefore, provides an important explanatory layer for the modest predictive strength observed in the regression models presented in Chapter 5.

While training participation was associated with improved competencies, limited access to finance, weak post-training support structures, and structural rural constraints reduced the likelihood that these competencies would translate into sustained entrepreneurial activity. This finding reinforces the importance of adopting a systems-oriented approach to vocational training evaluation, where programme effectiveness is assessed in relation to enabling conditions rather than training inputs alone.

6.11 SUBSIDIARY OBJECTIVE IV: INSTITUTIONAL CONDITIONS SHAPING PROGRAMME EFFECTIVENESS

The institutional environment emerged as a critical determinant of how effectively AgriSETA learnership programmes translated training participation into entrepreneurial and employment outcomes. Stakeholders consistently emphasised that organisational mandates, resource allocation processes, and monitoring systems shaped both access to training and the sustainability of post-training trajectories.

Institutional Theory provides a useful lens for interpreting these dynamics by explaining how formal rules, organisational routines, and accountability structures influence programme performance. In contexts where compliance requirements dominate institutional practice, innovation and responsiveness to local developmental needs may be constrained (Allais, 2025). The qualitative findings presented below illustrate how such institutional conditions shaped the reach and long-term effectiveness of learnership interventions.

6.11.1 Organisational Roles, Mandates and Resource Allocation

Respondents indicated that while AgriSETA played a central role in accrediting training providers and monitoring compliance with programme standards, its institutional mandate did

not extend to ensuring employment absorption or enterprise sustainability after training completion. This created a structural gap between programme delivery and long-term developmental outcomes.

One official explained the limits of institutional authority:

“We accredit training providers... we do monitoring... but outside of that, there is no power to force absorption. We can encourage, but we cannot enforce it.” (Participant 2, AgriSETA)

Training providers further highlighted how funding allocations influenced programme participation. Resource constraints at the institutional level often limited the number of trainees who could be accommodated despite high demand:

“The allocation is often just for 10 candidates, when over 40 may qualify.” (Participant 6, Lovedale TVET College)

These accounts illustrate how programme access and reach were shaped by institutional resource distribution mechanisms rather than solely by trainee capability or labour market demand. Institutional Theory conceptualises this phenomenon as policy-practice decoupling, where programme objectives emphasising inclusive development are constrained by organisational capacity and bureaucratic procedures (Bekele et al., 2023).

In practical terms, such dynamics limit the scalability of learnership programmes and contribute to uneven developmental outcomes across regions and institutions.

6.11.2 Monitoring, Evaluation and Outcome Accountability

Monitoring and evaluation practices were also identified as a significant institutional constraint. Stakeholders reported that programme oversight focused primarily on administrative compliance, financial reporting, and training completion metrics, with limited systematic tracking of post-training outcomes such as enterprise formation or sustained employment.

An executive acknowledged this limitation:

“Traceability has not been forthcoming because the data is not readily available... we are now trying to look at alumni databases to understand where trainees are.”
(Participant 1, AgriSETA)

Service providers similarly observed that responsibility for tracking developmental impact often shifted away from funding institutions:

“Monitoring does not go beyond institutional compliance... assessing real impact on trainees becomes the burden of the service provider.” ***(Participant 7, Vegado)***

The absence of structured tracer systems and outcome-based performance indicators limits institutional learning and programme adaptation. From the perspective of the Functional Theory of Value, this represents a failure to verify whether training investments generate measurable economic or social returns (Majola, 2025).

Institutional Theory further suggests that when accountability systems prioritise adherence to procedures rather than developmental impact, organisations may achieve formal performance targets without necessarily improving beneficiary outcomes (Mahlahla & Hlatshwayo, 2024).

Taken together, the findings indicate that institutional conditions significantly influence the effectiveness of AgriSETA learnership programmes. While training delivery structures are relatively well established, limitations in mandate scope, resource allocation processes, and outcome monitoring mechanisms reduce the likelihood that competencies developed during training will translate into sustainable entrepreneurial activity.

These qualitative insights provide an important explanatory context for the quantitative findings presented in Chapter 5, which showed that competency development had only moderate predictive power for entrepreneurial engagement. The results, therefore, highlight the importance of strengthening institutional coordination, tracer systems, and outcome-based accountability frameworks to enhance the developmental impact of vocational training interventions.

6.12 SUBSIDIARY OBJECTIVE II: CURRICULUM RESPONSIVENESS AND TECHNOLOGICAL MODERNISATION

Stakeholders consistently identified curriculum responsiveness as a key determinant of the effectiveness of AgriSETA learnership programmes in promoting entrepreneurial growth. While current qualifications were widely regarded as providing a solid technical foundation, respondents expressed concern that curriculum structures were not evolving at a pace consistent with labour market transformation, technological innovation, and changing agricultural production systems.

Research on vocational education reform similarly highlights that slow curriculum renewal can weaken the developmental impact of training interventions by limiting the relevance of acquired competencies to emerging sectoral demands (Muwaniki, 2022). The findings presented below, therefore, examine how curriculum design influences entrepreneurial readiness through two interrelated dimensions: market alignment and technological integration.

6.12.1 Alignment with Evolving Market Demands

Participants emphasised that existing AgriSETA curricula remained strongly oriented towards conventional production practices, with limited integration of advanced agribusiness management, mechanisation support services, or market-driven value chain competencies. While foundational agricultural knowledge was considered valuable, stakeholders argued that entrepreneurial readiness requires broader exposure to financial management, market access strategies, and enterprise sustainability planning.

Senior institutional actors noted the need to strengthen managerial and technical specialisations required for rural economic development:

“Technicians that can fix mechanisation... veterinary support... financial management skills... those are critical if we are to improve the rural economy.”
(Participant 1, AgriSETA)

Officials also described ongoing efforts to transition from legacy qualifications to occupationally oriented curricula designed to enhance labour market responsiveness:

“The curriculum is being overhauled... moving from National Certificates to Occupational Qualifications because the current curriculum is old and outdated.”
(Participant 2, AgriSETA)

Training providers confirmed that review cycles had often been lengthy, resulting in delayed adaptation to sectoral changes:

“The current curriculum has not been reviewed in many years. Only now are we aligning new qualifications with updated QCTO requirements.” ***(Participant 4, AgriSETA)***

These findings reflect broader critiques of vocational education systems, in which formal accreditation processes may lag behind technological and market developments (OECD, 2023). Institutional Theory conceptualises this dynamic as ceremonial conformity, whereby programmes maintain regulatory legitimacy despite declining substantive alignment with industry needs (Makole et al., 2023).

6.12.2 Technological Modernisation and Digital Competency Integration

Stakeholders further highlighted the growing importance of digital agriculture and innovation-oriented training in enhancing the attractiveness and sustainability of agricultural entrepreneurship. While awareness of technological transformation was widespread, practical integration of digital competencies within learnership curricula was reported to be inconsistent and uneven across training contexts.

Respondents indicated that emerging technologies such as precision farming systems, drone-assisted crop management, and digital market platforms were not yet systematically incorporated into training delivery. In some cases, institutional constraints limited the capacity to adopt blended learning approaches or digital training tools, particularly in rural settings characterised by weak infrastructure.

These observations align with research on the “digital divide” in vocational education systems, where policy recognition of technological change is not always matched by curriculum reform or resource allocation (Tang et al., 2024). From a theoretical perspective, the Unified Theory of

Acceptance and Use of Technology (UTAUT) suggests that technology adoption depends on facilitating conditions, perceived usefulness, and organisational support structures (Neves et al., 2025). Where training environments lack these enabling conditions, graduates may recognise the importance of digital tools yet remain unable to integrate them effectively into entrepreneurial practice.

The qualitative evidence indicates that curriculum responsiveness is a critical intermediary mechanism linking training participation to entrepreneurial outcomes. While AgriSETA learnerships successfully develop foundational technical competencies, limitations in market-oriented content and technological integration reduce the likelihood that graduates will translate skills into sustainable enterprise activity.

These findings provide a contextual explanation for the quantitative results presented in Chapter 5, where respondents reported high levels of technical skill development but more moderate perceptions of digital readiness and entrepreneurial capability. The combined evidence suggests that strengthening curriculum agility, fostering industry collaboration, and integrating digital competencies may enhance the long-term effectiveness of vocational training interventions in promoting entrepreneurial growth.

6.13 SUBSIDIARY OBJECTIVE V: PARTNERSHIP ECOSYSTEMS AND PROGRAMME EFFECTIVENESS

Stakeholders consistently emphasised that the effectiveness of AgriSETA learnership programmes depended not only on training quality but also on the strength of institutional partnerships across government, industry, and academic sectors. These partnerships were viewed as essential for mobilising complementary resources required to support entrepreneurial transition, including policy coordination, workplace exposure, mentorship, and curriculum innovation.

The literature on vocational education systems similarly highlights the importance of multi-stakeholder ecosystems in sustaining programme impact, particularly in sectors characterised by technological change and fragmented labour markets (Allais, 2025). The qualitative findings,

therefore, explore how collaborative arrangements influence programme outcomes and the extent to which partnership structures enable or constrain entrepreneurial growth.

6.13.1 Government Coordination and Enabling Policy Environments

Participants viewed government institutions as central actors in shaping the enabling environment for learnership implementation. Beyond funding and regulatory oversight, respondents emphasised the need for improved interdepartmental coordination to align agricultural development initiatives, land use planning, and enterprise support programmes.

One senior stakeholder highlighted the risks associated with fragmented policy implementation:

“You do not find one department planning agricultural production while another allocates the same land for housing... There must be synergy to create an enabling environment.” (Participant 1, AgriSETA)

These perspectives reflect broader concerns regarding institutional fragmentation within South Africa’s skills and rural development systems (Jia et al., 2023). Institutional Theory suggests that when policy domains operate in isolation, programme objectives may be undermined by conflicting mandates or inefficient resource deployment (Scott & Gong, 2021).

In practical terms, insufficient coordination reduces the likelihood that training outcomes will translate into viable enterprise opportunities, particularly in rural contexts where access to land, infrastructure, and markets is mediated through government systems.

6.13.2 Industry Engagement and Workplace Learning Pathways

Industry partnerships were widely regarded as critical for bridging the gap between training participation and labour market integration. Employers provided workplace exposure, mentorship, and sector-specific knowledge, enhancing trainees’ ability to navigate real production environments.

Respondents noted that organised agricultural bodies and private sector actors played an important role in shaping programme relevance and supporting smallholder development

initiatives. However, stakeholders also acknowledged structural limitations in employer absorption capacity, with many enterprises unable to retain trainees after programme completion.

This dual role positions the industry as both an enabler and a constraint within the vocational training ecosystem. From a Resource-Based View perspective, partnerships with employers facilitate access to valuable external resources, including professional networks, market linkages, and experiential knowledge (Semali, 2024). These resources are often critical for entrepreneurial sustainability but remain unevenly distributed across training contexts.

6.13.3 Academic Partnerships and Knowledge-Driven Curriculum Renewal

Universities and research institutions were identified as strategic partners in ensuring that learnership programmes remain responsive to technological and market developments. Stakeholders emphasised the importance of research-informed curriculum design, innovation support, and the continuous identification of emerging skills requirements.

One respondent described the role of academic collaboration in maintaining programme relevance:

“Researchers must keep informing learning pathways so that curricula do not become outdated.” (Participant 1, AgriSETA)

The Resource-Based View conceptualises research institutions as sources of specialised knowledge assets that can enhance programme competitiveness and innovation capacity (Peñate et al., 2024). However, respondents also noted that translating research insights into curriculum reform often involved lengthy administrative processes, reflecting institutional rigidity that may delay programme adaptation.

The findings indicate that partnership ecosystems function as critical mediating structures influencing the effectiveness of vocational training programmes. While AgriSETA provides regulatory coordination and funding support, the sustainability of entrepreneurial outcomes depends on the combined contributions of government policy alignment, industry mentorship capacity, and academic knowledge integration.

These qualitative insights provide further explanation for the quantitative findings presented in Chapter 5, where respondents reported relatively high levels of collaboration. However, collaboration variables demonstrated limited predictive power for entrepreneurial start-up behaviour. This suggests that the presence of partnerships alone does not guarantee effective entrepreneurial transition unless collaboration mechanisms are sufficiently integrated, sustained, and outcome-oriented.

6.14 SUBSIDIARY OBJECTIVE IV: MARKET ABSORPTION AND SUSTAINABILITY OF ENTREPRENEURIAL OUTCOMES

A central concern among stakeholders was whether participation in AgriSETA learnership programmes translated into sustainable employment or entrepreneurial opportunities. Respondents indicated that post-training outcomes varied considerably: only a minority of trainees secured formal employment, while many pursued self-employment or small-scale agricultural activities under constrained conditions. The sustainability of these pathways was widely perceived to depend on labour market absorption capacity, access to complementary resources, and the presence of structured post-training support systems.

These findings align with broader evidence in vocational education research showing that skills acquisition alone is insufficient to secure economic participation unless supported by enabling institutional and market conditions (Beber et al., 2025). The subsections below examine employment absorption, entrepreneurial pathways, and the sustainability of post-training outcomes.

6.14.1 Absorption into Formal Employment

Stakeholders reported that absorption into host organisations occurred in some cases but remained inconsistent and largely dependent on employer capacity and sectoral demand. While learnerships provided valuable workplace exposure and improved employability, the agricultural labour market's limited growth constrained opportunities for permanent placement.

One respondent explained that absorption targets were difficult to enforce in practice due to financial and organisational limitations within host enterprises:

“Even if there is a recommendation that a percentage should be absorbed, employers cannot always take trainees on permanently because of limited funding and organisational space.” (Participant 2, AgriSETA)

These insights suggest that employment outcomes are influenced less by training performance alone and more by structural labour market dynamics. From the perspective of the Functional Theory of Value, the utility of acquired skills depends on demand conditions and institutional incentives that facilitate their productive deployment (Choi & Chang, 2020).

Although some trainees secured employment through strong workplace performance, stakeholders emphasised that reliance on host employers as the primary mechanism for graduate absorption is insufficient to sustain large-scale outcomes. Expanding employer incentives and strengthening sectoral growth strategies were identified as necessary measures to enhance employment pathways.

6.14.2 Entrepreneurial Pathways Following Programme Completion

Where employment opportunities were limited, stakeholders noted that many trainees attempted to apply their skills through self-employment, cooperative farming initiatives, or small household-based enterprises. Learnership participation was perceived to enhance technical readiness and confidence to initiate such activities. However, the long-term viability of these ventures was frequently undermined by resource constraints, including limited access to finance, land, inputs, and markets.

Respondents also highlighted the absence of systematic tracking mechanisms, which made it difficult to determine whether entrepreneurial initiatives were sustained over time. This lack of outcome monitoring reduced institutional learning and constrained programme adaptation.

Existing research on youth entrepreneurship in South Africa similarly indicates that while training programmes may increase entrepreneurial intentions, business survival rates remain low without access to supportive ecosystems and financial capital (Ofosu-Appiah et al., 2025). From a Resource-Based View perspective, trainees may acquire valuable human capital through

learnership participation. However, the absence of complementary financial and social resources limits their ability to transform competencies into sustainable enterprise outcomes (Lose, 2021). Entrepreneurship, therefore, emerged as a common but fragile transition pathway, reflecting both the strengths and limitations of current learnership models.

6.14.3 Sustainability of Post-Training Outcomes

Stakeholders emphasised that sustaining employment or entrepreneurial outcomes required interventions both before and after programme participation. Key factors included appropriate trainee selection, continuous monitoring of performance during training, and structured post-programme support mechanisms such as mentorship, incubation, and access to starter resources. Participants suggested that improved screening processes could enhance programme effectiveness by identifying individuals with genuine entrepreneurial motivation and sectoral commitment. In addition, follow-up support was considered critical for reinforcing skill application and preventing post-training disengagement.

From a theoretical standpoint, these findings reflect the Resource-Based View's emphasis on intangible resources such as commitment, resilience, and network embeddedness as determinants of entrepreneurial sustainability (Lose, 2021). They also align with insights from the Unified Theory of Acceptance and Use of Technology, which highlights the importance of continuous reinforcement and institutional support in sustaining behavioural adoption beyond initial training exposure (Jia et al., 2023).

Collectively, stakeholder perspectives suggest that sustainability is not solely a function of training quality but of systemic alignment across funding mechanisms, institutional coordination, and long-term ecosystem support.

The qualitative evidence provides important explanatory depth for the quantitative findings presented in Chapter 5. While participants reported high levels of competency development and positive perceptions of training quality, only a relatively small proportion transitioned into entrepreneurial start-up activity. This indicates that post-training structural conditions, rather than training experiences alone, play a decisive role in shaping economic outcomes.

The findings therefore reinforce the central argument of this study: AgriSETA learnership programmes contribute meaningfully to human capital development, but their effectiveness in promoting entrepreneurial growth is mediated by labour market absorption capacity, access to complementary resources, and the strength of institutional support systems.

6.15 INTEGRATED ANALYSIS OF LEARNERSHIP EFFECTIVENESS AND ENTREPRENEURIAL TRANSITION

The qualitative findings presented in this chapter provide a deeper explanation of how AgriSETA learnership programmes influence entrepreneurial growth outcomes. While earlier sections analysed themes such as competency development, institutional constraints, curriculum relevance, partnerships, and market absorption independently, stakeholders consistently emphasised their interdependence in shaping post-training trajectories. This reinforces broader scholarship suggesting that vocational training effectiveness is contingent on systemic and contextual conditions rather than training design alone (OECD, 2023; Allais, 2025).

A key insight emerging from the analysis is that learnership participation contributes positively to the development of technical competencies and enhances entrepreneurial readiness. However, readiness does not automatically translate into sustainable employment or enterprise development. Instead, outcomes are mediated by access to complementary resources, institutional coordination, and post-training ecosystem support. From a Resource-Based View perspective, the programmes strengthen human capital by equipping trainees with valuable and transferable skills. Nevertheless, entrepreneurial sustainability depends on access to additional strategic resources such as finance, infrastructure, mentorship, and market networks (Lose, 2021).

Institutional Theory further explains how bureaucratic processes, fragmented policy implementation, and compliance-oriented monitoring systems constrain programme effectiveness. Stakeholders noted that institutional mandates often prioritise enrolment and completion targets rather than long-term economic outcomes. Such dynamics reflect patterns of institutional decoupling, where policy intentions are not fully realised in practice due to systemic limitations (Allais, 2025).

Insights from the Functional Theory of Value suggest that the perceived usefulness of training is shaped not only by skill acquisition but also by the ability to apply those skills in real economic contexts. Where structural barriers such as funding shortages, land access constraints, and limited employer absorption persist, the functional value of training is reduced despite positive learning experiences (Dehne & Gröschner, 2023).

Similarly, perspectives from the Unified Theory of Acceptance and Use of Technology highlight the importance of continuous support mechanisms in sustaining behavioural adoption. Stakeholders indicated that trainees were more likely to apply entrepreneurial competencies when mentoring, incubation opportunities, and institutional follow-up were available. In the absence of such support, motivation and engagement often declined after programme completion (Abbad, 2021).

These qualitative insights complement the quantitative findings presented in Chapter 5. While statistical results demonstrated positive relationships between training participation and competency development, the predictive strength of these variables in explaining entrepreneurial activity was modest. The qualitative evidence suggests that this reflects structural and ecosystem constraints rather than weaknesses in training quality.

The integrated analysis demonstrates that AgriSETA learnership programmes are effective in building foundational skills and enhancing entrepreneurial readiness. However, their long-term impact on sustainable economic participation depends on broader systemic alignment involving resource availability, institutional coordination, curriculum responsiveness, and multi-stakeholder collaboration. This contributes to emerging context-sensitive models of vocational training effectiveness in developing economies.

6.16 CHAPTER SUMMARY

This chapter presented qualitative findings on stakeholder perceptions of the effectiveness of AgriSETA learnership programmes in promoting entrepreneurial growth. While programmes were successful in developing technical competencies, gaps remained in business, digital, and soft skill development. Financial constraints, limited post-training support, institutional

bottlenecks, and labour market conditions were identified as key barriers to translating training into sustainable outcomes.

The findings highlight the importance of curriculum responsiveness, digital integration, and stronger partnerships with government, industry, and academic institutions. Consistent with vocational training literature, sustainable entrepreneurial outcomes require enabling ecosystems beyond the training intervention itself (OECD, 2023).

The integrated analysis demonstrated that learnerships contribute meaningfully to human capital formation, but that long-term impact depends on systemic and contextual factors. These qualitative insights provide explanatory depth to the quantitative results in Chapter 5 and inform the triangulated discussion presented in Chapter 7.

CHAPTER 7: DISCUSSION AND TRIANGULATION OF FINDINGS

7.1 INTRODUCTION

This chapter integrates the quantitative results from Chapter 5 and the qualitative insights from Chapter 6 to provide a comprehensive interpretation of how AgriSETA learnerships influenced trainees' technical competence, entrepreneurial capabilities, and post-training progression. The synthesis highlights areas of convergence and divergence across both strands and explains why technical competence did not always translate into sustained employment or enterprise activity.

The interpretation is grounded in the empirical findings of this study and situated within the broader policy and institutional context outlined earlier in the thesis, including national priorities related to skills development, employability, work-integrated learning, digitalisation, and the effective use of public resources. In doing so, the chapter aligns the study's findings with the broader national agenda for inclusive and sustainable skills development.

The chapter outlines the recommendations emerging from the integrated analysis, presents the study's contribution to knowledge, identifies its limitations, and proposes a structured framework for strengthening post-training outcomes. It concludes by reflecting on the broader significance of the study for strengthening agricultural skills development in resource-constrained environments.

7.2 RATIONALE FOR TRIANGULATION

The interpretation of findings in this chapter follows an explanatory sequential mixed-methods logic, where quantitative patterns identified in Chapter 5 are clarified and contextualised through qualitative stakeholder insights presented in Chapter 6 (Toyon, 2021). Triangulation was essential in this study to explain why strong technical competence scores did not consistently translate into entrepreneurial engagement or sustained employment outcomes. Credibility was strengthened by convergence between statistical trends and stakeholder explanations regarding programme delivery, resource constraints, and post-training support.

Triangulation also accommodates instances where the datasets diverge. In this study, divergence between quantitative outcomes and qualitative accounts revealed the influence of structural constraints, differing stakeholder expectations, and institutional variability, as it may signal structural constraints, differing expectations, institutional variability, or contextual influences that shape learner outcomes (Creswell & Creswell, 2023). Recognising these differences enables a more realistic and grounded interpretation of entrepreneurial and employment trajectories, particularly in environments marked by uneven access to opportunities and support (Naidu-Valentine, 2024).

First, it enhanced the robustness of the findings by integrating survey-based indicators of competence and progression with stakeholder explanations of programme implementation realities. Second, it provides a deeper understanding of how learners navigate the transition from formal training to practical work and entrepreneurial activity, which cannot be fully explained by quantitative or qualitative data alone (Wasti et al., 2022). The discussion that follows is organised around the four research objectives, with each objective examined through a comparison of quantitative indicators and qualitative experiences.

7.3 OVERVIEW OF KEY FINDINGS

Across both quantitative and qualitative strands, the learnerships demonstrated consistent effectiveness in developing technical agricultural competencies. Survey respondents reported confidence in core production practices and routine operational tasks, and these perceptions were corroborated by facilitators and host employers who observed stable competence in workplace settings. The quantitative results reflected the same pattern, with higher mean scores for technical competency relative to other domains. Together, these findings indicate that the technical component of the programme was delivered reliably and absorbed effectively. Similar patterns of strong technical skill acquisition in agricultural training programmes have been noted in prior studies (Rabie & Cornelissen, 2023).

In contrast, the development of business and entrepreneurial capabilities was more variable. While trainees recognised the relevance of business planning, budgeting, record-keeping, and market decision-making, qualitative accounts suggested difficulty in applying these skills independently without structured mentorship or post-training support. Although self-reported

confidence was moderate, it did not consistently translate into entrepreneurial action. These findings suggest that entrepreneurial competencies require continued reinforcement beyond the formal training period to support practical application and enterprise initiation (Adeyanju et al., 2021).

A further cross-strand pattern related to systemic and contextual constraints, including limited access to finance, land, markets, digital tools, and ongoing institutional support. These constraints shaped the extent to which trainees could convert their skills into viable enterprise opportunities. As a result, progression from competence to economic activity remained uneven and was influenced more by environmental and resource conditions than by skills acquisition alone (Raza et al., 2024).

These combined patterns frame the objective-based discussion that follows, indicating that structural, institutional, and resource conditions played a decisive role in shaping trainees' post-training pathways. Across both strands, a recurring dynamic emerged in which strong technical competence did not consistently translate into entrepreneurial or employment progression, indicating that structural and contextual factors played a decisive role in shaping learners' post-training pathways.

7.4 OBJECTIVE I: SKILLS AND COMPETENCIES

This section examines the extent to which the learnerships contributed to the development of both technical agricultural skills and business-related entrepreneurial competencies. The quantitative findings indicated comparatively more substantial outcomes in practical and operational skills, while the qualitative evidence illustrated how these skills were applied in workplace contexts. In contrast, the development of business and entrepreneurial competencies was more variable and appeared dependent on the level of post-training support and opportunities available to learners (Rabie & Cornelissen, 2023). The subsections that follow compare these patterns to identify points of convergence and divergence across the two strands of data.

7.4.1 Technical Skills

The quantitative findings presented in Chapter 5 indicated that survey respondents reported high levels of perceived competence in technical agricultural skills following participation in AgriSETA learnership programmes. Mean ratings for technical skills were among the highest across all measured constructs, suggesting strong perceived and statistically supported improvement in technical competence, strengthening practical production knowledge and workplace readiness. These results are consistent with the primary design objective of vocational learnership programmes, which emphasise applied competence and sector-specific skill acquisition.

Qualitative evidence from stakeholder interviews in Chapter 6 supports this pattern. Programme officials, training providers, and AgriSETA officials, training facilitators, and host employers consistently observed that technical skills development represented the most visible and immediate outcome of learnership participation. Stakeholders noted that trainees were generally able to perform routine agricultural tasks, demonstrate familiarity with production processes, and adapt to workplace environments during practical placements. These observations reinforce the quantitative indication that technical competence is a strong dimension of programme effectiveness.

However, stakeholders also emphasised that technical proficiency alone does not guarantee successful labour market or entrepreneurial outcomes. Institutional respondents highlighted variations in training quality across providers, including differences in access to modern equipment and exposure to emerging agricultural technologies. Such disparities may influence the extent to which technical competencies remain relevant in dynamic production contexts. These findings align with broader vocational education research, which suggests that while technical training strengthens employability foundations, its long-term impact depends on complementary capabilities and enabling conditions within the broader skills ecosystem.

Taken together, the quantitative and qualitative findings demonstrate that AgriSETA learnership programmes are effective in building foundational technical competencies. At the same time, the evidence suggests that translating these competencies into sustainable economic participation is shaped by institutional coordination, access to resources, and post-training support mechanisms.

This integrated interpretation highlights the importance of viewing technical skill development as a necessary but insufficient condition for entrepreneurial growth.

7.4.2 Business and Entrepreneurial Competencies

Quantitative findings presented in Chapter 5 indicated moderately positive ratings for the development of general business competencies following participation in AgriSETA learnership programmes. While mean scores suggested that respondents perceived some improvement in areas such as basic financial understanding, planning, and entrepreneurial confidence, these ratings were consistently lower than those recorded for technical agricultural skills. This pattern suggests that although learnership participation contributed to entrepreneurial readiness, its impact was uneven across competency domains.

Qualitative findings from Chapter 6 provide further insight into this discrepancy. Stakeholders interviewed during the study repeatedly emphasised that business-related skills were less systematically developed within the learnership framework. Programme officials and training providers observed that many trainees required additional support in financial management, market engagement, and enterprise planning after completing the formal training cycle. These perceptions suggest that while the curriculum provides foundational exposure to entrepreneurial concepts, the depth and practical application of such training may be insufficient to support independent enterprise development in resource-constrained environments.

Institutional respondents also highlighted the absence of structured follow-up mechanisms to reinforce the application of business skills. Without sustained mentorship, incubation support, or access to funding pathways, trainees often struggled to translate their acquired competencies into viable entrepreneurial activities. Similar dynamics have been reported in vocational education research, where business competence development requires complementary ecosystem support to generate sustainable economic participation.

The integrated evidence therefore suggests that AgriSETA learnership programmes contribute to the development of entrepreneurial awareness and confidence, but that gaps remain in the practical consolidation of business competencies. These findings help explain why the quantitative models in Chapter 5 demonstrated positive but modest predictive relationships

between training variables and entrepreneurial activity. Strengthening experiential learning opportunities, financial literacy training, and post-programme support structures may enhance the effectiveness of learnerships in promoting entrepreneurial growth.

This convergence between quantitative trends and stakeholder explanations indicates that structural and institutional support conditions strongly influence the development of entrepreneurial capability.

7.5 OBJECTIVE II: CONSTRAINTS AND SYSTEMIC BARRIERS

This section examines the structural conditions that shaped whether trainees were able to apply the skills developed during the learnerships. Although technical and business competencies formed a foundation for potential enterprise activity, evidence from both strands showed that factors beyond individual capability determined post-training progression. Limited access to finance, land or production space, and reliable markets emerged as recurring constraints that affected the sustainability and scale of entrepreneurial efforts (Raza et al., 2024). These constraints operated interactively, influencing how far skills could be converted into viable economic activity.

7.5.1 Access to Finance

The quantitative findings in Chapter 5 indicated that while respondents reported strong technical skill development and relatively positive perceptions of training quality, progression into entrepreneurial activity remained limited. Only a minority of survey respondents reported starting a business after completing the learnership programme. This pattern suggests that factors beyond competency development influence post-training economic outcomes.

Qualitative evidence presented in Chapter 6 provides further explanation for this trend. Stakeholders at all institutional levels consistently identified financial constraints, limited access to production resources, and inadequate post-training support as major barriers to trainees' ability to translate skills into sustainable entrepreneurial activity. Programme officials and training providers observed that many graduates lacked access to start-up capital, land, equipment, and

market linkages, which restricted their capacity to operationalise business ideas developed during training.

These findings highlight the importance of viewing learnership effectiveness within a broader structural context. While vocational training programmes can enhance human capital by strengthening knowledge and skills, entrepreneurial outcomes are also shaped by the availability of complementary resources and enabling institutional conditions. Literature on skills development in developing economies similarly emphasises that financial exclusion and resource constraints can limit the realisation of training benefits, particularly in sectors characterised by high entry costs and market volatility.

The integrated interpretation of quantitative and qualitative evidence, therefore, suggests that AgriSETA learnership programmes contribute meaningfully to capability development, but that systemic resource limitations constrain the conversion of these capabilities into entrepreneurial action. Addressing these constraints through coordinated funding pathways, incubation support, and strengthened institutional partnerships may improve the long-term developmental impact of the programmes.

7.5.2 Post-Training Support and Institutional Follow-Through

The quantitative results presented in Chapter 5 demonstrated that respondents generally perceived the learnership programmes to provide relevant technical knowledge and practical exposure. However, the same analysis showed that positive training perceptions did not translate into proportionally high levels of entrepreneurial activity or stable employment outcomes. This divergence indicates that programme effectiveness cannot be evaluated solely based on training delivery variables.

Qualitative findings in Chapter 6 provide additional insight into this pattern. Stakeholders highlighted the absence of structured post-training support mechanisms, including limited tracer studies, weak alum tracking systems, and insufficient mentorship or incubation opportunities after programme completion. Programme officials and service providers noted that once trainees exited the funded training cycle, institutional visibility of their progression declined substantially.

This reduced the ability of implementing organisations to monitor outcomes, provide targeted support, or adapt programme design based on real-world performance.

From an institutional perspective, these findings suggest that the learnership system is strongly oriented toward compliance with enrolment and completion targets rather than long-term developmental impact. Monitoring practices were described as focusing primarily on administrative accountability and financial reporting, with less emphasis on outcome-based evaluation. As a result, feedback loops that could inform curriculum improvement, resource allocation, and partnership strategies remain underdeveloped.

The integrated interpretation of evidence from Chapters 5 and 6 indicates that while learnership programmes strengthen foundational competencies, the absence of systematic post-training ecosystems limits the sustainability of these outcomes. Strengthening tracer systems, embedding structured mentorship pathways, and enhancing collaboration with industry and enterprise support agencies may improve programme continuity and increase the likelihood that training investments translate into durable economic participation.

7.5.3 Resource Constraints and Entrepreneurial Transition

The quantitative findings reported in Chapter 5 indicate that respondents generally rated their acquisition of technical competencies positively, suggesting that the learnership programmes contributed to human capital development. However, the regression analysis showed that competency variables demonstrated only modest predictive strength in explaining progression into entrepreneurial activity. This pattern implies that the possession of skills alone was insufficient to facilitate successful transition into enterprise formation or expansion.

The qualitative stakeholder interviews presented in Chapter 6 provide a contextual explanation for this outcome. Stakeholders consistently identified structural constraints, particularly limited access to start-up finance, production resources such as land and equipment, and restricted access to markets and professional networks. These constraints were identified as key barriers preventing graduates from translating their acquired skills into sustainable entrepreneurial ventures.

Institutional representatives and service providers further noted that graduates often exited learnership programmes without access to structured support mechanisms that could bridge the gap between training completion and enterprise establishment. In rural contexts, these challenges were compounded by infrastructure limitations, including weak connectivity, transport barriers, and slow administrative processes for land access and funding approvals.

From a Resource-Based View perspective, the findings suggest that although the programmes successfully strengthened internal resources in the form of technical competencies, many participants lacked complementary external resources necessary for entrepreneurial success. Without access to financial capital, social capital, and institutional support structures, the strategic value of newly acquired skills remained constrained.

The integrated interpretation of Chapters 5 and 6, therefore, indicates that the limited transition into entrepreneurial activity cannot be attributed solely to deficiencies in training design. Rather, it reflects broader ecosystem constraints that shape the conversion of competencies into economic outcomes. Strengthening linkages between learnership programmes and enterprise support systems, financial institutions, and agricultural value chains may enhance graduates' capacity to operationalise their skills sustainably.

7.6 OBJECTIVE III: CURRICULUM, INNOVATION, AND DIGITAL INTEGRATION

This section examines how the curriculum supported the development of knowledge and practices linked to entrepreneurship, innovation, and digital capability. While the curriculum provided a solid foundation in technical agricultural operations, its effectiveness in supporting entrepreneurial progression depended on how facilitators contextualised the content and the extent to which trainees were exposed to practical examples, innovation-oriented tasks, and digital tools (Siebel et al., 2023). As a result, the degree to which technical knowledge could be linked to enterprise applications varied between training sites.

7.6.1 Curriculum Relevance and Alignment

The curriculum provided a strong foundation in technical agricultural knowledge, which trainees generally viewed as applicable for practical workplace applications. However, both trainees and

facilitators noted that it placed limited emphasis on linking technical instruction to enterprise development, financial planning, or market realities (Muwaniki et al., 2022). This limited trainees' ability to plan production with commercial intent or anticipate the financial implications of operational decisions.

Facilitators also reported that time constraints and resource limitations reduced opportunities to contextualise the curriculum to local agricultural environments. This affected the extent to which learners could apply technical skills in entrepreneurial or market-facing contexts (Muwaniki et al., 2022).

7.6.2 Instructional Consistency and Delivery Variation

The findings presented in Chapter 5 focused primarily on programme inputs and competency development outcomes as reported by survey respondents. While the quantitative analysis demonstrated generally positive perceptions of training quality, curriculum relevance, and skills acquisition, the statistical models revealed limited explanatory power in predicting longer-term entrepreneurial engagement. This suggests that factors beyond individual competency development influence post-training outcomes.

Qualitative evidence from stakeholder interviews in Chapter 6 provides further insight into this pattern. Institutional representatives acknowledged that monitoring systems within the learnership framework were largely compliance-oriented, emphasising enrolment targets, certification rates, and financial reporting rather than sustained employment or enterprise development outcomes. In several instances, stakeholders indicated that formal tracer studies or structured alum tracking mechanisms were either absent or inconsistently implemented.

The absence of reliable longitudinal outcome data constrains institutional learning and limits the capacity of AgriSETA officials, training facilitators, host employers to evaluate the long-term developmental impact of learnership interventions. Without systematic follow-up, it becomes difficult to determine whether programme graduates secure employment, establish viable enterprises, or disengage from sectoral participation. This weak feedback loop reduces opportunities for curriculum refinement, resource reallocation, and policy adaptation.

From an Institutional Theory perspective, this pattern reflects a tendency toward procedural compliance rather than outcome-driven performance measurement. Organisations may prioritise adherence to regulatory requirements and funding cycles, while longer-term developmental objectives receive less operational attention. As a result, programme effectiveness is assessed in terms of delivery outputs rather than socio-economic impact.

The integrated interpretation of quantitative and qualitative findings, therefore, indicates that strengthening monitoring and evaluation frameworks is critical for enhancing programme effectiveness. Establishing tracer systems, outcome-based indicators, and collaborative data-sharing arrangements with training providers, employers, and support agencies may improve institutional accountability and enable more responsive programme design.

7.6.3 Digital and Innovation Integration

Findings from this study indicate that although elements related to digitalisation and innovation were present within AgriSETA learnership curricula, their practical integration into training delivery remained uneven. Quantitative evidence presented in Chapter 5 showed comparatively lower ratings for digital competence development and innovation readiness relative to technical skill acquisition. These patterns suggest that while exposure to innovation-related concepts existed, opportunities for applied learning were limited.

Qualitative insights from institutional stakeholders in Chapter 6 provide a contextual explanation for these patterns. Respondents highlighted constraints such as limited access to appropriate equipment, inconsistent connectivity in rural training environments, and restricted time allocated to digital content in the curriculum. These structural and operational limitations affected the extent to which facilitators could deliver innovation-oriented training in practice.

Stakeholders further indicated that digital and innovation competencies were often introduced at a conceptual level rather than through sustained experiential engagement. This included limited opportunities for trainees to interact with technology-enabled production systems, digital market platforms, or data-driven farm management tools. Such findings align with broader literature on vocational education in developing agricultural contexts, which notes that the presence of digital

curriculum components does not necessarily translate into effective skills transfer without adequate infrastructure and pedagogical adaptation (Choruma et al., 2024; Dibbern et al., 2024).

Taken together, the integrated evidence suggests that AgriSETA learnership curricula remain strongly oriented toward technical skill formation, while the development of innovation and digital capabilities is more variable. The extent to which curriculum exposure translates into entrepreneurial readiness appears to depend on institutional capacity, facilitator practices, and the availability of practical learning opportunities. These dynamics help explain the uneven development of entrepreneurial outcomes identified in Chapter 5 and reinforce the importance of strengthening systemic support for innovation-focused training delivery (Brown & Majumdar, 2020).

7.7 OBJECTIVE IV: MARKET ABSORPTION AND SUSTAINABILITY

This section considers the outcomes experienced by trainees after completing the learnerships, focusing on both employment and entrepreneurial pathways. While some trainees secured short-term employment or attempted small-scale enterprise activity, long-term continuity in either pathway was limited. Progression beyond initial efforts was shaped by the structural conditions discussed in the previous section, particularly access to finance, land or production space, and reliable markets. As a result, trainees' capacity to sustain economic activity depended less on individual skill and more on the availability of external enabling conditions (Boye et al., 2023).

7.7.1 Employment Pathways

Findings from this study suggest that employment outcomes following participation in AgriSETA learnership programmes were variable and often uncertain. Quantitative evidence presented in Chapter 5 indicated modest levels of transition into sustained economic activity, with relatively few respondents reporting progression into stable entrepreneurial or employment pathways. These patterns point to structural limitations in the agricultural labour market's absorption capacity.

Qualitative insights from institutional stakeholders presented in Chapter 6 provide further contextual explanation. Respondents noted that while workplace exposure during learnership

placements offered valuable practical experience, the availability of permanent employment opportunities within host organisations remained limited. Employers were often constrained by financial pressures, seasonal production cycles, and fluctuating labour demand, reducing their ability to absorb trainees into long-term positions.

Stakeholders further observed that employment trajectories were frequently characterised by intermittent engagement in short-term agricultural activities rather than sustained formal employment. This reflects broader sectoral dynamics identified in the literature, in which skills development initiatives improve employability but do not necessarily guarantee stable labour-market integration in resource-constrained rural economies (OECD, 2021).

The integrated findings indicate that while learnership participation contributes to the development of work-relevant competencies, employment sustainability is shaped by external economic conditions and institutional support mechanisms beyond the scope of training provision alone.

7.7.2 Enterprise Attempts and Continuity

Several trainees attempted to establish small-scale agricultural enterprises after completing the learnerships, particularly where family or community land was available (Magadla et al., 2024). These efforts demonstrated initiative and an intention to apply technical knowledge. However, most enterprises remained micro in scale and were dependent on limited personal or household resources. Participants described intermittent production cycles influenced by access to inputs, seasonal variability, and available time.

Without structured post-training support or linkage mechanisms, trainees found it challenging to maintain consistent production, reinvest earnings, or expand operations. As a result, enterprise activity tended to be short-lived or supplementary to other income sources rather than a primary livelihood strategy (Mgendi et al., 2021).

7.7.3 Conditions Influencing Sustainability

Across both employment and entrepreneurial pathways, outcomes were primarily shaped by structural conditions rather than individual ability. Even trainees who displayed strong technical proficiency and motivation encountered challenges when attempting to maintain continuity in their work or enterprise activities. The key factors influencing sustainability included access to finance for inputs, secure production space, and stable market channels.

Where these enabling conditions were absent, trainees struggled to maintain momentum beyond initial engagement. Facilitators and host employers noted that limited follow-up support and weak linkage mechanisms further reduced the long-term viability of employment and enterprise progression.

The evidence across both strands converges to show that while trainees possessed the technical capability to participate in agricultural work and small-scale enterprise, stable market absorption and sustained entrepreneurial activity were constrained by environmental conditions (Dhillon & Moncur, 2023). Employment opportunities tended to be temporary, and enterprise attempts remained small and challenging to sustain. These patterns reinforce the conclusion that post-training outcomes depend on the interaction between individual capabilities and broader structural opportunities.

7.8 CROSS-CUTTING SYNTHESIS

Findings from both the quantitative and qualitative phases indicate that AgriSETA learnership participation contributed most consistently to the development of technical agricultural competencies. Survey results presented in Chapter 5 showed comparatively high ratings for practical skill acquisition. In contrast, qualitative interview evidence in Chapter 6 confirmed that facilitators and host employers perceived improvements in participants' workplace readiness.

However, the application of business and entrepreneurial competencies appeared more constrained. Quantitative ratings for entrepreneurial capability were comparatively lower, and interview findings suggested that many participants required continued guidance to translate conceptual understanding into independent enterprise activity.

The study further demonstrates that structural conditions significantly influenced post-training economic outcomes. Survey evidence relating to limited access to finance, production resources, and market opportunities corresponded with modest levels of transition into sustained employment or entrepreneurial activity. Qualitative accounts reinforced the interconnected nature of these constraints, indicating that challenges in one domain often intensified difficulties in others. As a result, economic activity was frequently described as temporary or supplementary rather than stable.

The findings suggest that while learnership programmes contributed to human capital formation, sustainable entrepreneurial progression depended on the alignment between acquired competencies and enabling contextual conditions. Variations in curriculum delivery, exposure to digital tools, opportunities for applied practice, and access to post-training support influenced the extent to which participants could convert training gains into viable livelihood pathways. These results highlight the importance of integrating skills development interventions with broader institutional and market support mechanisms.

7.9 IMPLICATIONS

This section outlines the implications of the findings for policy, programme delivery, post-training support, and future research. The central conclusion of the study is that while the learnerships strengthened trainees' technical capability, the translation of this capability into sustained employment or enterprise activity depended on the presence of enabling conditions beyond the training context (Muwaniki et al., 2024). Addressing these conditions requires coordinated action across training institutions, sector stakeholders, and support agencies to ensure that pathways for practical application accompany skills development (Muwaniki et al., 2024).

7.9.1 Policy Implications

The findings suggest that policy interventions should focus on the structural barriers that shape trainees' post-training progression. In particular, access to financial support for start-up activities, secure production space, and structured market entry pathways requires more deliberate coordination between training authorities, agricultural development programmes, and local economic agencies (CSIS, 2022). Strengthening alignment between national skills strategies,

such as those outlined in the NDP and related rural development programmes, and local value-chain initiatives may improve opportunities for trainees to convert technical capability into sustained economic participation.

Policies that extend beyond training delivery to support post-training linkages, mentorship, and funding mechanisms are likely to enhance the long-term impact of the learnerships. Greater attention to digital inclusion and market information systems may also reduce barriers associated with accessing buyers, networks, and administrative processes (Yuan & Sun, 2024).

7.9.2 Programme and Practice Implications

At the programme level, the findings highlight the need for stronger integration between technical instruction and enterprise-oriented applications. Although trainees developed practical agricultural competence, opportunities to apply business, financial, and market-related concepts during training were limited (Edziwa & Blignaut, 2022). Structured activities, such as enterprise simulations, cost-planning exercises, digital record-keeping tasks, and small-scale production trials with support, may help bridge this gap.

Variation in facilitation practices also highlights the value of standardised instructional guidance, including shared teaching materials, professional development for facilitators, and clearer expectations regarding the contextualisation of the curriculum. Enhancing the practical linkage between curriculum content, local markets, and digital tools would better prepare trainees for independent decision-making after programme completion (Smalley, 2024).

7.9.3 Post-Training Support Systems

The findings emphasise the significance of structured post-training support in sustaining employment or entrepreneurial activity. Several participants expressed uncertainty about accessing advisory services, funding mechanisms, or market networks after the learnership concluded. Establishing formal follow-up systems, including mentorship, extension services, and linkages to agricultural cooperatives or support agencies, may improve continuity.

Access to shared production spaces, community resource hubs, incubator-style facilities, or cooperative production models could also provide the infrastructural stability needed for trainees to maintain activity beyond the training period. These forms of support would help ensure that the benefits of the learnership extend into longer-term economic participation (He & Chen, 2024).

7.9.4 Implications for Future Research

Future research may examine the longer-term trajectories of trainees beyond the immediate post-training phase to better understand how skills, opportunities, and constraints evolve (Mustajab & Irawan, 2023). Comparative studies across provinces or agricultural sectors could identify which organisational arrangements most effectively support sustained employment or enterprise participation.

Further work could also explore collective or cooperative enterprise models, particularly in contexts where individuals have limited access to finance, land, and market networks. Research on embedded mentorship, digital advisory systems, and structured linkage programmes may offer insights into scalable approaches for strengthening post-training transition outcomes.

The recommendations that follow are grounded in evidence from both strands of the study, reflecting the need to strengthen competence, opportunity structures, and post-training support mechanisms simultaneously.

7.10 RECOMMENDATIONS

The findings show that while the learnerships effectively strengthened technical competence, entrepreneurial progression was constrained by systemic, curricular, and contextual barriers. The recommendations that follow focus on the areas where learners faced persistent obstacles. They are grounded in triangulated evidence from both strands of the study and identify the institutional, structural, and pedagogical refinements needed to support more effective post-training pathways (Sithole et al., 2024).

7.10.1 Strengthening Post-Training Support

Learners often completed the programme with adequate technical ability but without the sustained support required to apply these competencies independently. Many reported uncertainty about where to access advisory services, markets, or operational guidance, which weakened early attempts at enterprise activity. AgriSETA should introduce a structured post-training support mechanism that includes mentorship, scheduled follow-up, and clear referral pathways to agricultural advisors and enterprise development agencies (Boye et al., 2024). Strengthening these linkages would support continuity and reduce early-stage attrition.

7.10.2 Improving Access to Finance

Access to finance was a significant constraint on learners' ability to initiate or scale productive activity. Although participants understood basic financial principles, they lacked feasible pathways to secure start-up inputs or cover early operating costs. AgriSETA, in collaboration with municipalities and development finance institutions, should establish tailored funding options for graduates, including micro-grants, input vouchers, and subsidised starter packs with transparent eligibility criteria (Zegeye et al., 2023). These mechanisms would reduce reliance on household resources and support early momentum in enterprise development.

7.10.3 Enhancing Curriculum Integration

While the curriculum provided reliable technical grounding, the integration of business, innovation, and digital competencies was uneven across training sites. Learners lacked structured opportunities to apply these capabilities in realistic decision-making contexts. The curriculum should include enterprise simulations, costing and budgeting exercises, digital record-keeping tasks, and contextualised market-facing activities throughout the programme (Sari et al., 2025). These enhancements would strengthen applied learning and improve entrepreneurial readiness.

7.10.4 Standardising Facilitation and Instruction

Variation in facilitation quality contributed to inconsistent learning experiences. Some facilitators contextualised content effectively, while others relied heavily on theoretical instruction with

limited practical engagement. AgriSETA should introduce clear facilitation guidelines, standardised teaching resources, and regular capacity-building opportunities for facilitators to ensure consistent delivery of enterprise-related content (Misko et al., 2021)

7.10.5 Addressing Infrastructure and Production Constraints

Limited access to secure production space restricted learners' ability to practise or initiate enterprise activity after completing the programme. AgriSETA and sector partners should explore shared production areas, community-managed resource hubs, or cooperative production models to provide reliable access to land, tools, and essential inputs (Aamohammed et al., 2025). These arrangements would create stable conditions that enable learners to refine and sustain their activities over time.

7.10.6 Improving Market Access

Market access remained a decisive barrier for learners attempting to commercialise their activities. While participants could identify potential buyers, they struggled to secure consistent demand or meet formal market requirements. AgriSETA should collaborate with producer associations, retailers, cooperatives, and municipal agricultural units to establish structured market linkage pathways and support learners in meeting quality and supply expectations (Ndlovu & Masuku, 2021).

7.10.7 System-Level Coordination

Fragmented institutional arrangements limited learners' ability to transition from training to meaningful economic participation. AgriSETA should strengthen alignment between learnership objectives, local agricultural value-chain initiatives, municipal development plans, digital inclusion strategies, and youth enterprise programmes. Improved institutional coherence would ensure that training, resources, and market opportunities are connected in ways that support learner progression (Geza et al., 2023)

Across these areas, the evidence suggests that technical competence alone is insufficient to sustain entrepreneurial progress. Effective outcomes depend on coordinated support, accessible

opportunities, and a curriculum that links technical capability with commercial application in consistent and contextually relevant ways (Muwaniki et al., 2024).

7.11 CONTRIBUTION TO THE BODY OF KNOWLEDGE

This study advances current knowledge by explaining how technical competence, entrepreneurial capability, and structural conditions interact to shape post-training outcomes within AgriSETA learnerships. Through its explanatory sequential mixed-methods design, the study clarifies why competence alone is insufficient to support sustained economic participation and demonstrates how institutional, contextual, and behavioural factors influence learner progression. The contributions outlined below show how the study extends theoretical debates, strengthens methodological practice, provides new empirical evidence, and offers practical guidance for improving the design and implementation of agricultural learnerships (Kapazoglou et al., 2023). By demonstrating how competence interacts with opportunity structures and support mechanisms, the study shows that entrepreneurial progression requires systemic alignment rather than skills acquisition alone.

7.11.1 Theoretical Contribution

The study advances theoretical understanding by integrating Institutional Theory, the Resource-Based View, the Functional Theory of Value, and UTAUT to explain how entrepreneurial capability develops within skills training systems. The findings extend RBV by illustrating that internal capability is constrained when access to complementary external resources is limited. They reinforce Institutional Theory by showing how structural barriers operate as pressures that restrict learner progression and shape behavioural responses.

The study also highlights how limited exposure to digital tools influences technology confidence and readiness, offering insights relevant to the UTAUT model. By combining these perspectives, the study provides a more comprehensive account of learner progression than is typically achieved by single-theory approaches (Getenet et al., 2024).

7.11.2 Methodological Contribution

The study demonstrates the value of an explanatory sequential mixed-methods design for evaluating vocational training programmes. The quantitative phase established patterns in competence development, while the qualitative phase clarified how learners interpreted and applied these competencies in practice. Triangulation strengthened interpretation by identifying both convergence and meaningful divergence between strands, revealing structural constraints that single-method designs may overlook.

The research, therefore, offers a replicable analytical approach for assessing learnership outcomes and similar training interventions, particularly in contexts where opportunity structures vary (Yusop et al., 2022).

7.11.3 Empirical Contribution

The study provides rare, context-specific empirical evidence on post-training outcomes for AgriSETA learnerships in the Eastern Cape Province, an area with limited prior research. The findings highlight disparities between technical competence and entrepreneurial readiness, showing that resource constraints frequently hinder learners from sustaining economic activity.

The study further documents the significance of access to finance, secure production space, market linkages, and digital readiness as determinants of post-training progression, offering new insights into debates on rural enterprise development, youth participation in agriculture, and the conditions required for meaningful economic engagement (Rogito et al., 2020).

7.11.4 Practical and Policy Contribution

The findings offer practical guidance for AgriSETA, training providers, municipalities, and partner institutions. They highlight the need for more coherent post-training support, stronger integration of business and digital competencies into the curriculum, and improved alignment between skills development strategies and local economic opportunities. The study also clarifies where system-level fragmentation hinders learner progression and provides evidence-based

recommendations for enhancing the sustainability and impact of agricultural learnerships (Rajuroy, 2025).

Taken together, these contributions demonstrate how capability, opportunity, and support interact to shape post-training outcomes. The study provides a foundation for future research on strengthening agricultural skills development in resource-constrained environments. It contributes to broader debates on the systemic conditions required for sustainable youth participation in agriculture (Geza et al., 2021).

7.12 LIMITATIONS OF THE STUDY

While this study provides important insight into the effectiveness of AgriSETA learnership programmes in supporting entrepreneurial progression, several limitations should be acknowledged in interpreting the findings.

First, the research adopted a single-case explanatory mixed-methods design focused on agricultural learnerships in the Eastern Cape Province. Although this context offered a valuable setting for in-depth investigation, the findings are analytically rather than statistically generalisable. Economic structures, institutional arrangements, and labour market conditions differ across provinces and sectors, which may influence the applicability of the results to other SETA environments.

Second, participation in the qualitative phase depended on stakeholder availability and organisational access. As a result, the range of perspectives represented may not fully capture the diversity of programme implementation experiences across all training sites. Differences in institutional capacity and operational conditions could therefore be unevenly reflected in the data.

Third, the quantitative strand relied on self-reported survey data to measure entrepreneurial outcomes, including enterprise initiation, employment engagement, and perceived economic participation. While such measures are widely used in entrepreneurship and vocational training research, they may be affected by response bias, recall limitations, and subjective interpretation of economic success. The absence of longitudinal enterprise tracking or formal verification records limits the ability to independently confirm reported outcomes or assess business

sustainability over time. However, the study mitigated this limitation through triangulation with qualitative interview data, which provided contextual explanations for reported entrepreneurial trajectories. Future research could strengthen measurement robustness by incorporating administrative datasets, business registration records, or panel designs to track entrepreneurial progression longitudinally.

Fourth, the timing of data collection limited the ability to evaluate longer-term entrepreneurial sustainability and employment trajectories. The findings, therefore, reflect early post-training patterns rather than fully matured livelihood outcomes.

Fifth, integrating quantitative and qualitative evidence in a sequential explanatory design presents inherent challenges. Differences in sample composition, measurement formats, and levels of contextual detail required careful interpretation when synthesising findings across strands.

Finally, as with all qualitative inquiry, interpretation of interview data may be influenced by the researcher's positionality and analytical judgement. Efforts were made to strengthen trustworthiness through systematic coding procedures, audit trails, and the grounding of interpretations in participant accounts.

These limitations do not diminish the value of the study. Rather, they clarify the boundaries within which the findings should be understood and highlight the need for future research incorporating longitudinal designs, multi-case comparisons, and stronger institutional data integration.

7.12.1 Geographic and Sector Scope

The study was conducted in the Eastern Cape Province, with a specific focus on agricultural learnerships facilitated through AgriSETA. Although the region provides an important context for understanding rural training pathways, its economic characteristics, institutional arrangements, and resource conditions may differ from those of other provinces or SETA environments. These differences limit the extent to which the findings can be generalised to other settings (Ngumbela, 2021).

7.12.2 Sampling and Participation Constraints

Participation in the qualitative phase depended on the availability and willingness of institutional stakeholders. This may have limited the diversity of perspectives represented, as some training providers, host employers, or officials were inaccessible during the data collection period. As a result, specific organisational experiences may be underrepresented in the findings (Manara et al., 2023).

7.12.3 Self-Reported Data Limitations

The quantitative strand relied on self-reported survey data, which carries inherent risks of response bias. Learners may have overstated or understated their competence or progression due to social desirability, recall constraints, or differing interpretations of questionnaire items. Although steps were taken to minimise these effects, self-assessment measures remain subject to such limitations (Durmaz et al., 2020).

7.12.4 Timing of Data Collection

Data was collected relatively soon after learners completed the programme. This limited the ability to assess longer-term employment or entrepreneurial outcomes, as some trajectories may only become evident over extended periods. The findings, therefore, capture early-stage patterns rather than longer-term sustainability (Wao et al., 2025).

7.12.5 Resource and Context Constraints

The research was conducted within environments characterised by resource limitations, including incomplete programme documentation, uneven training site conditions, and differing levels of organisational support. These contextual realities may have shaped learner experiences and influenced programme delivery, meaning that some observed patterns may reflect localised conditions rather than universally occurring features of agricultural learnerships (Dhillon & Moncur, 2023).

These limitations do not detract from the value of the findings. Instead, they provide an important interpretive frame that clarifies the study's scope and identifies areas where further research may strengthen understanding of long-term learner progression and programme effectiveness (Ruppar, 2025).

7.13 PROPOSED FRAMEWORK

The integrated findings suggest that learners' progression from technical competence to sustained economic participation depends on the alignment of three interrelated elements, namely individual capability, access to enabling opportunities, and the presence of ongoing institutional support. While the learnerships reliably developed technical skills, progression remained limited when opportunities and support structures were weak or inconsistent. This section proposes a framework that synthesises these insights into a structured model designed to strengthen post-training outcomes and guide programme refinement across AgriSETA and partner institutions (Freed et al., 2025).

7.13.1 Rationale for the Framework

The rationale for the framework arises from a clear pattern across the findings, specifically that competence alone does not lead to sustained entrepreneurial progression. Learners demonstrated adequate technical ability; however, their capacity to apply this competence was constrained by external conditions, including insufficient funding, insecure production space, and limited market access.

The qualitative evidence further showed that the absence of continued mentorship or guidance reduced learners' confidence and narrowed their ability to respond to operational challenges. These patterns indicate the need for a model that illustrates how competence interacts with opportunity and support to produce meaningful post-training outcomes (Hu et al., 2021).

7.13.2 Components of the Framework

The framework consists of three core components, each representing a necessary condition for learners to convert training into viable economic activity. Sustainable progression occurs when these components operate in combination.

i. Competence Pillar

This pillar encompasses the technical, business, innovation, and digital capabilities developed during the learnership. The findings confirmed that while technical competence was reliably achieved, entrepreneurial and digital competencies required greater emphasis and more structured opportunities for application (Petropoulos, 2024).

ii. Opportunity Pillar

Learners' ability to act on their competence depended on access to essential economic conditions, including finance, secure production space, and markets. These opportunities determined whether learners could translate capability into tangible enterprise activity.

iii. Support Pillar

Ongoing support was a critical determinant of post-training continuity. Learners required mentorship, advisory services, and institutional linkages to navigate early operational challenges. The absence of these mechanisms weakened early-stage momentum.

7.13.3 Framework Illustration

The interaction between the three pillars is illustrated in the figure below. The model emphasises that sustainable entrepreneurial progression emerges only when competence intersects with opportunity and support. Gaps in any pillar interrupt the transition from training to meaningful economic participation (Venesaar et al., 2021)

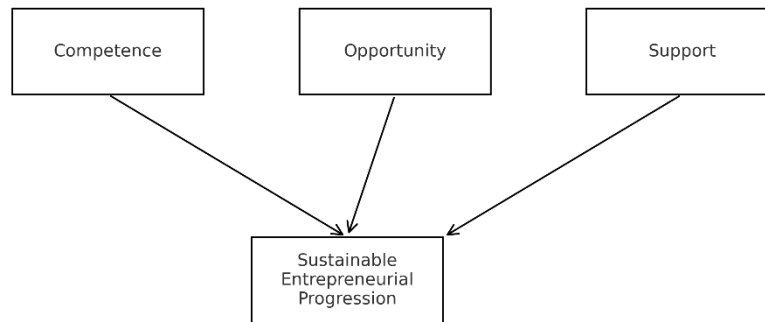


Figure 21: Integrated Framework for Sustainable Post-Training Entrepreneurial Progression

7.13.4 Explanation of the Framework

The framework shows that technical competence forms a necessary foundation; however, meaningful progression depends on whether learners can access the opportunities and support required to operationalise their capabilities. The opportunity pillar captures the external economic conditions needed for enterprise activity, while the support pillar highlights the institutional mechanisms that help learners sustain momentum. The model demonstrates that the intersection of these pillars represents the point at which learners are most likely to progress beyond initial learning and into sustained economic participation (Henning et al., 2022).

7.13.5 Implications of the Framework

The framework provides several implications for strengthening learnership design and post-training outcomes. It highlights the need for curriculum refinement to better integrate business, innovation, and digital competencies. It also underscores the importance of coordinated institutional support that links learners to finance, land, and markets in ways that are responsive to local conditions. For policymakers and implementing partners, the model offers a basis for aligning skills development initiatives with broader agricultural development strategies (Asante, 2025).

The framework synthesises the study’s core insights into a structured model that clarifies how capability, opportunity, and support interact to shape post-training outcomes. It provides a

practical tool for guiding programme refinement and for strengthening the coherence of post-training pathways within agricultural skills development systems (Geza et al., 2021).

7.14 CONCLUSION

This chapter integrated the findings from both research strands to provide a consolidated interpretation of how AgriSETA learnerships shaped learners' technical competence, entrepreneurial capability, and post-training progression. The evidence demonstrated that although learners developed reliable technical skills, their transition into sustained economic activity was constrained by external conditions, including limited access to finance, insecure production space, and restricted market pathways. The qualitative findings further highlighted the importance of continued mentorship and institutional linkages, confirming that competence alone is insufficient without the enabling conditions required to act on it.

Drawing these insights together, the chapter presented recommendations for strengthening curriculum delivery, institutional coordination, and post-training support. It outlined the study's theoretical, methodological, empirical, and practical contributions and acknowledged the limitations that shape the boundaries of the analysis. The proposed framework synthesised the study's key findings, illustrating how capability, opportunity, and support must intersect for sustained post-training progression to occur. The chapter reinforces that the effectiveness of agricultural learnerships depends not only on the development of technical competence but also on the presence of accessible opportunities and coherent support systems that enable learners to translate their skills into meaningful and sustained economic participation (Muwaniki et al., 2024).

The chapter demonstrates that while learnerships successfully build technical capability, the extent to which these competencies translate into sustainable entrepreneurial or employment outcomes ultimately depends on the structural, institutional, and contextual conditions that shape learners' post-training realities. This integrated understanding provides a foundation for improving programme design, strengthening support mechanisms, and informing future research on agricultural skills development in resource-constrained environments.

REFERENCES

- Aamohammed, C., Behera, E., & Ok, E. (2025). Cooperatives and Farmer Organizations: The role of cooperatives in enhancing farmers' bargaining power and access to resources.
- Abbad M. M. M. (2021). Using the UTAUT model to understand students' usage of e-learning systems in developing countries. *Education and information technologies*, 26(6), 7205–7224. <https://doi.org/10.1007/s10639-021-10573-5>
- Abd Rahman, N., Zubairi, Y., Jani, R., Abdul Batau, M.F., Shamsudheen, M., Ishak, N., Hanafi, H., & Abdul Bahri, E. (2025). Governance structures and systemic challenges shaping the future of the technical and vocational education and training (TVET) workforce. *Education + Training*. 1–21. 10.1108/ET-11-2024-0508.
- Aboobaker, A. (2022). *Macroeconomic determinants of South Africa's post-apartheid income distribution* (World Inequality Lab Working Paper No. 2022/08). World Inequality Lab. https://wid.world/www-site/uploads/2022/05/WorldInequalityLab_WP2022_08_PostApartheidIncomeShare.pdf
- Abrahams, L. (2020). Innovation Entanglement at Three South African Tech Hubs. *The African Journal of Information and Communication*, 26, 1–29. <https://doi.org/10.23962/10539/30358>
- Adeniran, Adetayo. (2025). Understanding Cronbach's Alpha in Social and Management Studies. 2. 11-16.
- Adesoba, M. E. (2023). Vocational agricultural training as a pathway to economic empowerment and food security: Lessons from West Africa. *International Journal of Agriculture and Earth Science*, 9(7), 229-238. <https://doi.org/10.56201/ijaes.vol.9.no7.2023.pg229.238>
- Adeyanju, D., Mburu, J., Mignouna, D. (2021). Youth Agricultural Entrepreneurship: Assessing the Impact of Agricultural Training Programmes on Performance. *Sustainability* 13, 1697. <https://doi.org/10.3390/su13041697>
- Adhikary, P., Roy, N., Mburu, G., Kabra, R., Habib, N. A., Kiarie, J., Dhabhai, N., Chowdhury, R., & Mazumder, S. (2022). Characteristics, experiences and actions taken by women to address delayed conception: A mixed-methods cross-sectional study protocol. *PLOS ONE*, 17(3), e0264777. <https://doi.org/10.1371/journal.pone.0264777>
- African Union Commission. (2025). *African Continental TVET Strategy 2025-34: Sustainable Development, Social Justice and Employability for All*. Addis Ababa: African Union.
- Agholor, I.A., Chowdhury, A., Yusuf, S.F.G. (2024). Agri-Preneurial Resilience and Success:

- The Correlation and Demographic Characteristics of Smallholders in South Africa. *Administrative Sciences* 14, 256. <https://doi.org/10.3390/admsci14100256>
- Agricultural Sector Education and Training Authority. (2023). AgriSETA Sector Skills Plan 2023-24: Final Sector Skills Plan. AgriSETA.
- Agriculture Sector Education and Training Authority. (2023). AgriSETA learning programmes. <https://www.agriseta.co.za/agriseta-learning-programmes/>
- Agriculture Sector Education and Training Authority. (2024). AgriSETA annual report 2023/24. <https://www.agriseta.co.za/wp-content/uploads/2024/11/2-AGRISETA-AR2024-FINAL-WEB-VERSION-1.pdf>
- AgriSeta (2020). Become an accredited training provider.
- AgriSeta. (2020). Research Agenda 2020-2025.
- AgriSETA. (2021). Annual Report 2021/22. AgriSETA.
- AgriSETA. (2021). *Sustainability through the green economy and its impact on skills requirements* (Green Economy Study 2021). AgriSETA. https://www.agriseta.co.za/wp-content/uploads/2022/09/AGRISETA-Green-Economy-study_2021.pdf
- AgriSETA. (2023). *Agriculture Sector Skills Plan 2023–2024*. AgriSETA. https://www.agriseta.co.za/wp-content/uploads/2023/09/Agriseta_Sector-Skills-Plan-2023-24.pdf
- AgriSETA. (2023). Seed Sub-Sector Skills Plan 2023-2024. AgriSETA. https://www.agriseta.co.za/wp-content/uploads/2023/09/Agriseta_Seed_.pdf
- AgriSETA. (2024). *Annual Report 2023/2024*. Retrieved from <https://www.agriseta.co.za/wp-content/uploads/2024/11/2-AGRISETA-AR2024-FINAL-WEB-VERSION-1.pdf>
- AgriSETA. (2024). *South Africa is failing its future: The agricultural education system is in jeopardy*. <https://www.agriseta.co.za/wp-content/uploads/2024/12/South-Africa-is-failing-its-future.pdf>
- AgriSETA. (2025). *Agriculture Sector Skills Plan 2025-2030*. https://www.agriseta.co.za/wp-content/uploads/2025/04/AgriSETA_Sector-Skills-Plan.pdf
- AgriSETA. (2025). Strategic Plan 2025/26-2029/30. AgriSETA. https://www.agriseta.co.za/wp-content/uploads/2025/04/AgriSETA_Strategic-Plan- c.pdf
- Agumba, H., Simpson, Z., & Ndofirepi, A. (2023). Towards understanding the influence of rurality on students' access to and participation in higher education. *Critical Studies in Teaching and Learning*, 11(1), 22–42. <https://doi.org/10.14426/cristal.v11i1.643>
- Ahmed, A., Pereira, L., & Jane, K. (2024). Mixed Methods Research: Combining both qualitative

and quantitative approaches.

- Ahmed, S. K. (2024). How to choose a sampling technique and determine sample size for research: A simplified guide for researchers. In *Oral Oncology Reports* (Vol. 12). Elsevier Ltd. <https://doi.org/10.1016/j.oor.2024.100662>
- Ahmed, S. K. (2024). The pillars of trustworthiness in qualitative research. *Journal of Medicine, Surgery, and Public Health*, 2, 100051. <https://doi.org/10.1016/j.glmedi.2024.100051>
- Ahmed, S. K., Mohammed, R. A., Nashwan, A. J., Ibrahim, R. H., Abdalla, A. Q., M. Ameen, B. M., & Khedhir, R. M. (2025). Using thematic analysis in qualitative research. *Journal of Medicine, Surgery, and Public Health*, 6, 100198. <https://doi.org/10.1016/j.glmedi.2025.100198>
- Ajani, O (2024). The role of entrepreneurship curriculum in empowering rural students for socio-economic development in South Africa. *International Journal of Business Ecosystem & Strategy* (2687-2293). 6. 214-224. 10.36096/ijbes.v6i3.493.
- Akoobhai, B. (2024). *Identification of Skills Gaps in South Africa: A popular research report*. Swiss South African Cooperation Initiative. Department of Higher Education and Training.
- Aksom, H., & Vakulenko, V. (2023). Revisiting the scope and suggesting novel domains of institutional theory in public administration research. *Teaching Public Administration*, 42(2), 230, 250. <https://doi.org/10.1177/01447394231191935>
- Al-Abri, M. Y., & Rahim, A. A. (2022). The Difference Between Entrepreneurship and Small and Medium-Sized Enterprises. *Cite: Baltic Journal of Law & Politics*, 15, 2022. <https://doi.org/10.2478/bjlp-2022-00055>
- Allais, S. (2024). How the global VET toolkit weakened local colleges in South Africa. *Journal of Vocational Education & Training*, 77(1), 81–100. <https://doi.org/10.1080/13636820.2024.2411509>
- Allais, S., & Ngcwangu, S. (2025). ‘I wanna die a slow death when I’m busy with that annual training report....’: Why employer engagement for skills planning in South Africa goes wrong. *International Journal of Educational Development*, 113, Article 103217. <https://doi.org/10.1016/j.ijedudev.2025.103217>
- Alla-Mensah, J., Henderson, H. & McGrath, S. (2021). *Technical and vocational education and training for disadvantaged youth*. UNESCO-UNEVOC International Centre for TVET. https://unevoc.unesco.org/pub/tvet_for_disadvantaged_youth.pdf
- Alolabi, Y.A., Ayupp, K., Dwaikat, M.A. (2021). Issues and Implications of Readiness to

- Change. *Administrative Sciences* 11, 140. <https://doi.org/10.3390/admsci11040140>
- Alphonsus, N.S., Schmees, J.K. (2025). A community for expertise development – South African vocational colleges and their internal and external social characteristics. *Journal of Vocational Education & Training* 77, 101–120. <https://doi.org/10.1080/13636820.2024.2443918>
- Amankwah, A., & Gwatidzo, T. (2024). Food security and poverty reduction effects of agricultural technologies adoption – a multinomial endogenous switching regression application in rural Zimbabwe. *Food Policy*, 125, 102629. <https://doi.org/10.1016/j.foodpol.2024.102629>
- Amoah, J., Belas, J., Dziwornu, R., & Khan, K. A. (2022). Enhancing SME contribution to economic development: A perspective from an emerging economy. *Journal of International Studies*, 15(2), 63–76. <https://doi.org/10.14254/2071-8330.2022/15-2/5>
- Antoci, D. (2021). Values and emotions in personality system of adolescents and youths. <https://doi.org/10.18662/lumproc/atee2020/01>
- Arifin, Z., Hamsini, H., & Ahmad, B. (2023). Public service performance: a case study in public information and public communication. <https://doi.org/10.4108/eai.29,10,2022.2334011>
- Arrogante, O., González-Romero, G. M., López-Torre, E. M., Carrión-García, L., & Polo, A. (2021). Comparing formative and summative simulation-based assessment in undergraduate nursing students: nursing competency acquisition and clinical simulation satisfaction. *BMC nursing*, 20(1), 92. <https://doi.org/10.1186/s12912-021-00614-2>
- Asante, I. (2025). Digital technologies competencies and training needs of agricultural extension agents. 9. 376–389.
- Attwell, G., DePryck, K., Wambacq, I., Stieglitz, D., Bekiaridis, G., Campbell, M., Weerts, T, Jarmalavičiūtė, R, Dias, A, Correia, F, Karadog, A. (2023). Transforming Vocational Education and Training: Harnessing the Power of Digital Assessment Report and Policy Recommendations from the e-assessment in VET Project.
- Awodiji, O & Magogodi, C. (2023). Nexus between soft skills and technical vocational education and training and graduate employability. *INVOTEC*. 19. 35-46. [10.17509/invotec.v19i1.56340](https://doi.org/10.17509/invotec.v19i1.56340).
- Ayaz, A., & Yanartaş, M. (2020). An analysis on the unified theory of acceptance and use of technology theory (UTAUT): Acceptance of electronic document management system (EDMS). *Computers in Human Behavior Reports*, 2. <https://doi.org/10.1016/j.chbr.2020.100032>

- Babanveer Singh, K., & Tiwari, D. (2025). Agricultural extension as a tool for empowering rural women. *International Journal of Agriculture Extension and Social Development*, (8-7-58). Retrieved from <https://www.extensionjournal.com/article/view/2168/8-7-58>
- Balluck, J., Asturi, E., & Brockman, V. (2020). Use of the ADKAR® and CLARC® Change Models to Navigate Staffing Model Changes During the COVID-19 Pandemic. *Nurse leader*, 18(6), 539–546. <https://doi.org/10.1016/j.mnl.2020.08.006>
- BankSETA. (2025). *Constraints in the SETA's funding model and possible mitigating strategies*. BankSETA. <https://bankseta.org.za/wp-content/uploads/2025/03/CONSTRAINTS-IN-THE-SETAS.pdf>
- Barbosa, B., Benedicto, B., Santos, C., Filipe, S., Costa, F., Melo, A., Dias, G., Rodrigues, C. (2020). A Closer Look at VET Education through the Lenses of Sustainable Development Goals. 5378–5385. 10.21125/iceri. 2020.1169.
- Beber, B., Lakemann, T., Schnars, R., Lay, J. (2025). Employment Effects of Skills Trainings in Sub-Saharan Africa: A Systematic Review of Recent Randomized Controlled Trials. *De Economist* 173, 87–120. <https://doi.org/10.1007/s10645-024-09442-6>
- Bekele, T.A., Amponsah, S., Karkouti, I.M. (2023). African philosophy for successful integration of technology in higher education. *British Journal of Educational Technology* 54, 1520–1538. <https://doi.org/10.1111/bjet.13364>
- Bell, R. & Bell, H. (2020). Applying educational theory to develop a framework to support the delivery of experiential entrepreneurship education. *Journal of Small Business and Enterprise Development*, 27(6), 987, 1004. <https://doi.org/10.1108/jsbed/jsbed, 01, 2020, 0012>
- Bester, S. (2023). Exploring inclusive leadership and strategic visioning as pathways to well-being in TVET colleges. *Journal of Vocational, Adult and Continuing Education and Training* 6, 19. <https://doi.org/10.14426/jovacet.v6i1.316>
- Bhatnagar, S., Chaudhary, R., Sharma, S., Janjhua, Y., Thakur, P., Sharma, P., & Keprate, A. (2024). Exploring the dynamics of climate-smart agricultural practices for sustainable resilience in a changing climate. *Environmental and Sustainability Indicators*, 24, 100535. <https://doi.org/10.1016/j.indic.2024.100535>
- Bhattacharyya, P., Sinha, M., & Das, S. (2021). Implementation of Vocational Training Program under State Board Secondary Level schools in Kolkata: Challenges and Opportunities. 9. 718–732.
- Bihu, R. (2022). QUESTIONNAIRE SURVEY METHODOLOGY IN EDUCATIONAL AND

- SOCIAL SCIENCE STUDIES. International Journal of Quantitative and Qualitative Research Methods. 2021-2056. 10.37745/ijqqr . 13.
- Bogie, J. (2023). #GrowYourBiz Township Entrepreneurship Programme. UN Principles for Responsible Management Education.
- Bolton-King, R. S. (2022). Student mentoring to enhance graduates' employability potential. *Science & Justice*, 62(6), 785–794. <https://doi.org/10.1016/j.scijus.2022.04.010>
- Boonheang, W., & Cojorn, K. (2025). Fostering Analytical Thinking through Constructivist and Case-Based Learning: A Study of Vocational Students. *Journal of Practical Studies in Education*, 6(3), 81–89. <https://doi.org/10.46809/jpse.v6i3.109>
- Böschen, S., Hermens, S., Jakobs, E. M., Lohrberg, F., Madlener, R., Mütze-Niewöhner, S., Reicher, C., Schöpfer, Y. (2024). Infrastructures and Transformation: Between Path Dependency and Opening-Up for Experimental Change, in: pp. 93–117. https://doi.org/10.1007/978-3-031-54700-3_4
- Botha, M., Fischer, M., K., E., A., B., D. (2023). In search of a landing place for persons with disabilities: A critique of South Africa's skills development programme. *International Journal of Discrimination and the Law* 23, 163–180. <https://doi.org/10.1177/13582291231162315>
- Botha, M., Van Der Merwe, S. (2025). A framework to assess compliance training effectiveness: The case of banks in South Africa. *SA Journal of Human Resource Management* 23. <https://doi.org/10.4102/sajhrm.v23i0.2913>
- Botha, R. & Havemann, R. (2025). *Time to rethink skills development: An independent review of the Sector Education and Training Authority system* (Policy Paper 42). Economic Research Southern Africa. <https://econrsa.org/publications/time-to-rethink-skills-development-an-independent-review-of-the-sector-education-and-training-authority-system/>
- Boye, M., Ghafoor, A., Wudil, A. H., Usman, M., Prus, P., Fehér, A., & Sass, R. (2023). Youth Engagement in Agribusiness: Perception, Constraints, and Skill Training Interventions in Africa: A Systematic Review. *Sustainability*, 16(3), 1096. <https://doi.org/10.3390/su16031096>
- Brown, P., James, D. (2020). Educational expansion, poverty reduction and social mobility: Reframing the debate. *International Journal of Educational Research* 100, 101537. <https://doi.org/10.1016/j.ijer.2020.101537>
- Brown, T., & Majumdar, S. (2020). *Agricultural TVET in developing economies: Challenges and*

- possibilities* [UNEVOC Network Discussion Paper]. UNESCO-UNEVOC. https://unevoc.unesco.org/pub/discussion_paper_agricultural_tvete.pdf
- Bui, D. T., Nghia Vu, T., Tran, T. V. H., Duong, C. D., & Loan Le, T. (2023). Impact of institutional environment on social entrepreneurial intentions. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(3). <https://doi.org/10.1016/j.joitmc.2023.100120>
- Burch, P. & Crowson, R.L. (2020). Local Schooling and Organizational Change: New Insights from the Perspective of Institutional Theory. *Peabody Journal of Education*, 95(4): 331, 335, DOI: [10.1080/0161956X.2020.1800171](https://doi.org/10.1080/0161956X.2020.1800171)
- Cahyasari Putra, R, Barliana, M, Komaro, M, & Hamdani, A. (2022). Work-Integrated Learning in Vocational Education. 10.2991/assehr.k.220305.032.
- Caloffi, A., De Marco, M., & Ianni, L. (2023). Innovation intermediaries' types and functions. *Technological Forecasting & Social Change*, 194, 122298. <https://doi.org/10.1016/j.techfore.2022.122298>
- Camps, C., Kraus, S., Thomas, A., Tiberius, V., & Jones, P. (2025). Digital Entrepreneurship: A review, research synthesis, and development of a framework. *Technology in Society*, 84, 103124. <https://doi.org/10.1016/j.techsoc.2025.103124>
- Çela, E, Vajjhala, N, & Eappen, Philip. (2024). Artificial Intelligence in Vocational Education and Training. 10.4018/979-8-3693-8252-3.ch001.
- Center for Strategic and International Studies. (2022). *Access to finance for smallholder farmers*. CSIS. <https://www.csis.org/analysis/access-finance-smallholder-farmers>
- Chaitanya, G., Bastray, T., Hiremath, S., Gondesi, S., Jada, K., Ramesh, P., Bhavikatti, V. I., & Boddada, O. (2025). An empirical study on the role of leadership development program and its impact on entrepreneurial activities. *Risk and Decision Analysis*. https://doi.org/10.3233_RDA-231504
- Chakravorty, B., Arulampalam, W., Bhatiya, A. Y., Imbert, C., & Rathelot, R. (2024). *Can information about jobs improve the effectiveness of vocational training? Experimental evidence from India*—*Journal of Development Economics*, 169, Article 103273.
- Chakuzira, W., Okoche, J.M.M., Mkansi, M. (2024). Refining the Definition and Typologies of Entrepreneurship in Africa: A Systematic Review. *Administrative Sciences* 14, 184. <https://doi.org/10.3390/admsci14080184>
- Chand, P. & Tarei, P. K. (2021). Do the barriers of multi-tier sustainable supply chains interact? A multi-sector examination using resource-based theory and resource-dependent theory.

- Journal of Purchasing and Supply Management*, 27(5):1, 17.
<https://doi.org/10.1016/j.pursup.2021.100722>
- Chand, S.P. (2025). Methods of Data Collection in Qualitative Research: Interviews, Focus Groups, Observations, and Document Analysis. *Advances in Educational Research and Evaluation* 6, 303–317. <https://doi.org/10.25082/aere.2025.01.001>
- Chen, S., Shen, W., & Tan, X. (2023). Entrepreneurial Education Model Based on Interactive Technology and Cognitive Psychology. *International Journal of Human–Computer Interaction*, 40(13), 3494–3506. <https://doi.org/10.1080/10447318.2023.2189816>
- Cheung, G.W., Cooper-Thomas, H.D., Lau, R.S., Wang, L.C. (2024). Reporting reliability, convergent and discriminant validity with structural equation modeling: A review and best-practice recommendations. *Asia Pacific Journal of Management* 41, 745–783. <https://doi.org/10.1007/s10490-023-09871-y>
- Chiappero-Martinetti, E., Maestripieri, L., & Giroletti, T. (2024). Creating social value by empowering people: A social innovation perspective. *Annals of Public and Cooperative Economics*, 95(2), 413–439. <https://doi.org/10.1111/apce.12447>
- Chipfupa, U., Johanna Baloyi, R., Rambuda, H., & Masango, B. (2023). *ENTREPRENEURIAL DEVELOPMENT FOR ESTABLISHING SMALL FARMING BUSINESSES AND EMPLOYMENT BY YOUTH IN RAIN-FED CROP FARMING Report to the WATER RESEARCH COMMISSION by EDILEGNAW WALE ZEGEYE with contributions from. www.wrc.org.za*
- Chiromo, S.J., Khosa, R.M., & Kalitanyi, V. (2023). Online entrepreneurship teaching and learning approaches: A South African conceptual perspective. *Journal of Education (University of KwaZulu-Natal)*, (93), 163–180. <https://doi.org/10.17159/2520-9868/i93a08>
- Chitamba, A, Yearwood, V, Swanepoel, M, & Myeza, G. (2025). Project-Based Learning and The Development of Entrepreneurial Skills in Higher Education: An Integrative Approach. *International Journal of Business & Management Studies*. 06. 113–123. 10.56734/ijbms.v6n4a12.
- Choi, Y., & Chang, S. (2020). The effect of social entrepreneurs' human capital on and firm performance: The moderating role of specific human capital. *Cogent Business & Management*, 7(1). <https://doi.org/10.1080/23311975.2020.1785779>
- Chola, R., & Kiplagat, H. (2025). The Contribution of TVET to Sustainable Development. *Africa Journal of Technical and Vocational Education and Training*. 10. 58–63.

10.69641/afritvet. 2025.101178.

- Choo, L., Novak, A., Impellizzeri, F. M., Porter, C., & Fransen, J. (2024). Skill acquisition interventions for the learning of sports-related skills: A scoping review of randomised controlled trials. In *Psychology of Sport and Exercise* (Vol. 72). Elsevier Ltd. <https://doi.org/10.1016/j.psychsport.2024.102615>
- Choruma, D. J., Dirwai, T. L., Mutenje, M. J., Mustafa, M., Chimonyo, V. G. P., Jacobs-Mata, I., & Mabhaudhi, T. (2024). Digitalisation in agriculture: A scoping review of technologies in practice, challenges, and opportunities for smallholder farmers in sub-saharan africa. In *Journal of Agriculture and Food Research* (Vol. 18). Elsevier B.V. <https://doi.org/10.1016/j.jafr.2024.101286>
- Chowa, G. A. N., Masa, R., Zulu, G., & Manzanares, M. (2026). Program design and youth employability outcomes in South Africa: A longitudinal study. *Evaluation and Program Planning*, 114, Article 102714. <https://doi.org/10.1016/j.evalprogplan.2025.102714>
- Chu, H., Liu, Y., Wang, Y., Tian, M., Yang, Z., Zeng, L., Li, N., Wu, Y., Zhao, Y., Chi, C., Chen, Y., & Zhan, S. (2023). Mixed Methods Research in General Practice: Key Points of Design and Implementation and Case Analysis. *Chinese General Practice*, 26(1), 118–125. <https://doi.org/10.12114/j.issn.1007-9572.2022.0596>
- Colombo, M.G., Lucarelli, C., Marinelli, N., Micozzi, A. (2024). Emergence of new firms: A test of the resource-based view, signaling and behavioral perspectives. *International Entrepreneurship and Management Journal* 20, 1153–1196. <https://doi.org/10.1007/s11365-024-00951-z>
- Construction Skills Queensland & Queensland University of Technology. (2022). *Virtual Reality training in construction: Research summary*. CSQ / QUT. <https://www.csq.org.au/knowledge-centre/publications/virtual-reality-construction-training-research-summary/>
- Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.) [PDF]. SAGE Publications
- D’Oria, L., Crook, T. R., Ketchen, D. J., Sirmon, D. G., & Wright, M. (2021). The Evolution of Resource, Based Inquiry: A Review and Meta, Analytic Integration of the Strategic Resources–Actions–Performance Pathway. *Journal of Management*, 47(6): 1383–1429. <https://doi.org/10.1177/0149206321994182>
- Da Silva, F.M., Ogasavara, M.H., Pereira, R. (2024). Institutional distances and equity-based entry modes: a systematic literature review. *Management Review Quarterly* 74, 1723–

1790. <https://doi.org/10.1007/s11301-023-00346-4>
- Dahalan, F., Alias, N., & Shaharom, M. S. N. (2023). Gamification and Game Based Learning for Vocational Education and Training: A Systematic Literature Review. *Education and information technologies*, 1–39. Advance online publication. <https://doi.org/10.1007/s10639-022-11548-w>
- Dangarembwa, G. (2025). From Consultation to Collaboration: Harnessing Stakeholder Involvement for Innovation in Higher Education. 10.9734/bpi/mono/978-93-49729-81-0/CH9.
- David, W. & Extension, Kiu Publication. (2024). The Impact of Project-Based Learning on Developing Critical Thinking and Problem-Solving Skills. 3. 51-56.
- Davies, T. (2022). ASSESSING LEARNER COMPETENCY WITHIN THE NATIONAL QUALIFICATION FRAMEWORK.
- Davies, T., & Farquharson, F. (2004). The learnership model of workplace training and its effective management: Lessons learnt from a Southern African case study. *Journal of Vocational Education & Training*. 56. 181–203. 10.1080/13636820400200253.
- Day, S. W., Jean-Denis, H., & Karanja, E. (2025). Extending the resource-based view of social entrepreneurship: The role of artificial intelligence in scaling impact. *Journal of Risk and Financial Management*, 18(7), 341. <https://doi.org/10.3390/jrfm18070341>
- DBSA; World Bank & Department of Higher Education and Training (DHET). (2023). Going Beyond the Infrastructure Funding Gap: A South African Perspective — Technical and Vocational Education and Training (TVET) Sector Report (16 January 2023). DBSA / World Bank. <https://www.dbsa.org/sites/default/files/media/documents/2023-08/Beyond%20the%20Gap%20-%20Technical%20and%20Vocational%20Education%20and%20Training%20-%202023.pdf>
- Dehne, M., Gröschner, A. (2023). Utility-value change and the role of emotional cost in video-based learning: a matter of student teachers' interpretation of experience. *Frontiers in Psychology* 14. <https://doi.org/10.3389/fpsyg.2023.1166921>
- Demkowicz, O., Chatburn, E., Archer, C., Thompson, R., & Plackett, R. (2025). Advancing mixed methods in mental health research. *BMJ mental health*, 28(1), e301401. <https://doi.org/10.1136/bmjment-2024-301401>
- Department of Higher Education and Training. (2021). *Occupational Qualifications Sub-Framework (OQSF) Policy, 2021* (Government Notice 1463, No. 45401). Government

Gazette.

<https://www.dhet.gov.za/NQF%20Directorate%20Documents/OQSF%20Policy%202021.pdf>

Department of Higher Education and Training. (2023). *National Plan for Post-School Education and Training (NPPSET) 2021–2030*. Pretoria: DHET. <https://www.dhet.gov.za/SiteAssets/NPPSET/DHET%20NPPSET%20%20Web%20version%2018092023.pdf>

Department of Higher Education and Training. (2024). Factsheet on Gender for Students in PSET Institutions (2022). https://www.dhet.gov.za/Planning%20Monitoring%20and%20Evaluation%20Coordination/Factsheet%20on%20Gender%20for%20Students%20in%20PSET%20Institutions_2022.pdf

Department of Higher Education and Training. (2025). Statistics on Post-School Education and Training in South Africa: 2023. <https://www.dhet.gov.za/Information%20Systems%20Management/Statistics%20on%20Post-School%20Education%20and%20Training%20in%20South%20Africa%20C%202023.pdf>

Deshmukh, K., & Kumar, K. (2025). The Role of Effective Communication Skills in Enhancing Employability during Postgraduate Courses. *International Journal of Innovations in Science Engineering And Management*. 170–175. 10.69968/ijisem . 2025v4i2170-175.

Deshmukh, P. (2024). Chi-square test: A parametric or nonparametric enigma in public health research. *Indian Journal of Community and Family Medicine*, 10(2), 71–73. https://doi.org/10.4103/ijcfm.ijcfm_112_24

Dhillon, R., Moncur, Q. (2023). Small-Scale Farming: A Review of Challenges and Potential Opportunities Offered by Technological Advancements. *Sustainability* 15, 15478. <https://doi.org/10.3390/su152115478>

Dibbern, T., Romani, L. A. S., & Massruhá, S. M. F. S. (2024). Main drivers and barriers to the adoption of Digital Agriculture technologies. *Smart Agricultural Technology*, 8. <https://doi.org/10.1016/j.atech.2024.100459>

Dibbern, T., Romani, L., & Massruhá, S. (2024). Drivers and Barriers to Digital Agriculture Adoption: A Mixed-Methods Analysis of Challenges and Opportunities in Latin American. *Sustainability*, 17(8), 3676. <https://doi.org/10.3390/su17083676>

- Dichaba, M. (2021). Lifelong learning in the age of data: opportunities and policy impact. *Journal of Intellectual Disability, Diagnosis and Treatment*, 9(1), 64–70. <https://doi.org/10.6000/2292,2598.2021.09.01.8>
- Draucker, C. B., Rawl, S. M., Vode, E., & Carter-Harris, L. (2020). Integration Through Connecting in Explanatory Sequential Mixed Method Studies. *Western journal of nursing research*, 42(12), 1137–1147. <https://doi.org/10.1177/0193945920914647>
- Duarte, N., & Vardasca, R. (2023). Literature Review of Accreditation Systems in Higher Education. *Education Sciences*, 13(6), 582. <https://doi.org/10.3390/educsci13060582>
- Duong, C. D., Le, T. T., Dang, N. S., Do, N. D., & Vu, A. T. (2024). Unraveling the determinants of digital entrepreneurial intentions: do performance expectancy of artificial intelligence solutions matter?. *Journal of Small Business and Enterprise Development*, 31(7), 1327–1356.
- Durmaz, A. & Dursun, I. & Kabadayı, E. (2020). Mitigating the Effects of Social Desirability Bias in Self-Report Surveys: Classical and New Techniques. 10.4018/978-1-7998-1025-4.ch007.
- Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M., & Williams, M. D. (2019). Re-examining the unified theory of acceptance and use of technology (UTAUT): Towards a revised theoretical model. *Information systems frontiers*, 21(3), 719–734.
- Eastern Cape Department of Agriculture. (2025). *DoA strategic plan 2025-2030*. <https://ecagriculture.gov.za/wp-content/uploads/2025/04/DoA-Strategic-Plan-2025-2030-Final.pdf>
- Ebrahimi, R., Choobchian, S., Farhadian, H., Goli, I., Farmandeh, E., & Azadi, H. (2022). Investigating the effect of vocational education and training on rural women's empowerment. *Humanities and Social Sciences Communications*, 9(1), 167. <https://doi.org/10.1057/s41599-022-01187-4>
- Edelsbrunner, P.A., Simonsmeier, B.A., Schneider, M. (2025). The Cronbach's Alpha of Domain-Specific Knowledge Tests Before and After Learning: A Meta-Analysis of Published Studies. *Educational Psychology Review* 37. <https://doi.org/10.1007/s10648-024-09982-y>
- Education, Training and Development Practices Sector Education and Training Authority. (2024). *ETDP SETA annual report 2023/24*. <https://www.etdpseta.org.za/etd/sites/default/files/2025-05/2023-2024-annual-report.pdf>
- Edziwa, X., & Blignaut, S. (2022). Graduate employability skills: the Voice of Agricultural

- Technical Vocational Education and Training (ATVET) students in Zimbabwe. *South African Journal of Higher Education*, 36(2), 99–114. <https://doi.org/10.20853/36-2-4501>
- EfVET. (2024). Six key strategic recommendations to promote the development of professional skills in the agriculture, food industry, and forestry sectors at European level. <https://efvet.org/six-key-strategic-recommendations-to-promote-the-development-of-professional-skills-in-the-agriculture-food-industry-and-forestry-sectors-at-european-level/>
- Eisinga, R., Grotenhuis, M., & Pelzer, B. (2013). The reliability of a two-item scale: Pearson, Cronbach, or Spearman-Brown?. *International Journal of Public Health*, 58(4), 637–642. <https://doi.org/10.1007/s00038-012-0416-3>
- Elgar, E., Kauppi, K., & of Logistics, P. (2022). Institutional theory. www.tcpdf.org
- Ellis, J. L. (2023). The Spearman-Brown formula and reliabilities of random test forms (preprint). <https://arxiv.org/abs/2308.1381>
- Engelsen, S. (2022). The epistemic role of emotions in value sensitivity: A phenomenological analysis. *Perspectiva Filosófica*, 49(5), 153. <https://doi.org/10.51359/2357,9986.2022.256760>
- European Training Foundation (ETF). (2023). *ETF Digital Education Reform Framework. Teacher Task Force*. <https://teachertaskforce.org/sites/default/files/2023-07/ETF%20Digital%20Education%20Reform%20Framework.pdf>
- European Training Foundation. (2020). *African Continental Qualifications Framework (ACQF) infographic*. https://www.etf.europa.eu/sites/default/files/2020-10/acqf_infographic_en_2020_web.pdf
- European Training Foundation. (2021). *Monitoring and evaluating work-based learning in vocational education and training: A handbook for policy makers and social partners*. Turin: ETF
- European Training Foundation. (2021). *Public–Private Partnerships for Skills Development: A Governance Perspective, Volume I* (ETF Report). https://www.etf.europa.eu/sites/default/files/2021-01/ppps_for_skills_development_volume_i.pdf
- EWSETA. (2025). Energy Skills Roadmap. <https://ewseta.org.za/energy-sector/>
- Fan, J., Hu, J., Wang, J., 2024. How entrepreneurship education affects college students' entrepreneurial intention: Samples from China. *Heliyon* 10, e30776.. <https://doi.org/10.1016/j.heliyon.2024.e30776>

- Feng, B., Chen, M. (2020). The Impact of Entrepreneurial Passion on Psychology and Behavior of Entrepreneurs. *Frontiers in Psychology* 11. <https://doi.org/10.3389/fpsyg.2020.01733>
- Ferdousi, F., Rahman, M. Z., & Qamruzzaman, M. (2025). The role of business education in shaping entrepreneurial intentions: Examining psychological and contextual determinants among university students in Bangladesh. *Frontiers in Education*, 10, 1536604. <https://doi.org/10.3389/educ.2025.1536604>
- Fındıklı, M. & Yozgat, U. (2022). The Individual and Behavioral Factors of Social Entrepreneurs. 10.4018/978-1-6684-7593-5.ch043.
- Firetto, C., & Konak, A. (2024). Bringing critical thinking into the entrepreneurship classroom: Six techniques. *VentureWell*. <https://venturewell.org/iuse-critical-thinking/>
- Forcher-Mayr, M., & Mahlke, S. (2020). *Critical entrepreneurship education in general education and TVET: Two concepts of practice in a South African township*. *Discourse and Communication for Sustainable Education*, 11(2), 65–84. <https://doi.org/10.2478/dcse-2020-0019>
- Franklin, S. (2020). Enabled to work: The impact of government housing on slum dwellers in South Africa. *Journal of Urban Economics* 118, 103265. <https://doi.org/10.1016/j.jue.2020.103265>
- Freed, S., Voss, R. C., Falk, T., Rietveld, A. M., Alary, V., Chimonyo, V. G. P., Frija, A., Guettou-Djurfeldt, N., Lestrel, G., Singh, S., Ndiwa, A. M., & Zingwen, T. (2025). Agency and behavior change in agricultural research for development: New directions for guiding agri-food system transformations. *Agricultural Systems*, 228. <https://doi.org/10.1016/j.agsy.2025.104399>
- Freeman, R., Dmytriiev, S., & Phillips, Robert. (2021). Stakeholder Theory and the Resource-Based View of the Firm. *Journal of Management*. 47. 014920632199357. 10.1177/0149206321993576.
- Fréry, F., Lecocq, X. & Warnier, V. (2020). Competing With Ordinary Resources, *MIT Sloan Management Review*, 2015, vol. 56, no 3, p. 69. *MIT Sloan Management Review*. 56. 69–77.
- Gadanakis, Y. (2024). Advancing Farm Entrepreneurship and Agribusiness Management for Sustainable Agriculture. *Agriculture* 14, 1288. <https://doi.org/10.3390/agriculture14081288>
- Galleli, B., & Amaral, L. (2025). Bridging Institutional Theory and Social and Environmental Efforts in Management: A Review and Research Agenda. *Journal of Management*, 0(0).

<https://doi.org/10.1177/01492063251322429>

- Gamage, A. N. K. K. (2025). Research Design, Philosophy, and Quantitative Approaches in Scientific Research Methodology. *Scholars Journal of Engineering and Technology*, 13(02), 91–103. <https://doi.org/10.36347/sjet.2025.v13i02.004>
- Gamage, K.A.A., Dehideniya, D., Ekanayake, S.Y. (2021). The Role of Personal Values in Learning Approaches and Student Achievements. *Behavioral Sciences* 11, 102. <https://doi.org/10.3390/bs11070102>
- Gang, L. (2020). Impacts of Institutional Change on Industrial Economy: A China's automobile industry perspective. Ph.D. Thesis. ISCTE University Institute of Lisbon.
- Gavaza, B. & Stofile, R. (2025). The Radical and Disruptive Entrepreneurial Innovation Culture in South Africa's Townships. *International Journal of Entrepreneurship, Business and Creative Economy*. 5. 74-90. 10.31098/ijebce.v5i1.2785.
- Gerhart, B., & Feng, J. (2021). The Resource-Based View of the Firm, Human Resources, and Human Capital: Progress and Prospects. *Journal of Management*, 47(7), 1796–1819. <https://doi.org/10.1177/0149206320978799>
- Gerhart, B., & Feng, J. (2021). The Resource-Based View of the Firm, Human Resources, and Human Capital: Progress and Prospects. *Journal of Management*. <https://doi.org/10.1177/0149206320978799>
- Getenet, S., Cantle, R., Redmond, P., Albion, P. (2024). Students' digital technology attitude, literacy and self-efficacy and their effect on online learning engagement. *International Journal of Educational Technology in Higher Education*, Vol. 21. <https://doi.org/10.1186/s41239-023-00437-y>
- Geza, W, Ngidi, M, Temitope, O., Adetoro, A., Slotow, R., & Mabhaudhi, T. (2021). Youth Participation in Agriculture: A Scoping Review. *Sustainability*. 13. 10.3390/su13169120.
- Geza, W., Ngidi, M. S. C., Mudhara, M., Slotow, R., & Mabhaudhi, T. (2023). 'Is there value for us in agriculture?' A case study of youth participation in agricultural value chains in KwaZulu-Natal, South Africa. *Cogent Food & Agriculture*, 9(2). <https://doi.org/10.1080/23311932.2023.2280365>
- Ghashim, I. A., & Arshad, M. (2022). Internet of Things (IoT)-Based Teaching and Learning: Modern Trends and Open Challenges. *Sustainability*, 15(21), 15656. <https://doi.org/10.3390/su152115656>
- Ghosh, L., & Ravichandran, R. (2024). Emerging Technologies in Vocational Education and Training. *Journal of Digital Learning and Education*. 4. 41–49. 10.52562/jdle.v4i1.975.

- Gibberd, A. & Hankwebe, N. (2022). Transport experiences of people with disabilities during learnerships. *African Journal of Disability*, 11. <https://doi.org/10.4102/ajod.v11i0.936>
- Gobo, G. (2023). *Mixed Methods and Their Pragmatic Approach: Is There a Risk of Being Entangled in a Positivist Epistemology and Methodology? Limits, Pitfalls and Consequences of a Bricolage Methodology*. <http://www.qualitative-research.net/>
- Goldberg, C., & Kleintjes, S. (2022). Hearing Their Voices: Self Advocacy Strategies for People with Intellectual Disabilities in South Africa. *Disabilities* 2, 588–599. <https://doi.org/10.3390/disabilities2040042>
- Gomes, S., Ferreira, J. J., & Lopes, J. M. (2023). Entrepreneurial conditions and economic growth in entrepreneurial ecosystems: Evidence from OECD countries. *The International Journal of Entrepreneurship and Innovation*, 0(0). <https://doi.org/10.1177/14657503231156340>
- Gonçalves, S.M., Silva, R.V. (2021). Discussing the potential of the institutional theory to leverage service-dominant logic advancements. *European Journal of Management Studies* 26, 3–16. <https://doi.org/10.1108/ejms-01-2021-0004>
- Govender, R. & Pillay, R. (2023). *An analysis of key processes and systems being used by SETAs and the NSF to manage and fund learnerships, apprenticeships and internships (LAI)*. DHET.
- Government Technical Advisory Centre & Department of Higher Education and Training. (2020). *A baseline study on the destination of TVET college graduates to strengthen employment promotion in South Africa* (Tracer Study). <https://www.gtac.gov.za/wp-content/uploads/2022/02/A-Baseline-Study-on-the-Destination-of-TVET-College-Graduates-to-Strengthen-Employment-Promotion-in-South-Africa.pdf>
- Granić, A. (2024). Technology adoption at individual level: toward an integrated overview. *Universal Access in the Information Society*, 23(2), 843–858.
- Gu, Q. & Wu, Z. (2025). The Role of the Technical and Vocational Education and Training (TVET) Curriculum in Enhancing Workforce Readiness. *Vocational: Journal of Educational Technology*. 2. 80–88. 10.58740/vocational.v2i2.481.
- Gutterman, A. (2020). Definitions and Types of Entrepreneurship.
- Habiyaremye, A., Habanabakize, T., Nwosu, C. (2022). Bridging the labour market skills gap to tackle youth unemployment in South Africa. *The Economic and Labour Relations Review* 33, 786–805. <https://doi.org/10.1177/10353046221138400>
- Hamm, R.F., Levine, L.D., Szymczak, J.E., Parry, S., Srinivas, S.K., Beidas, R.S. (2023). An innovative sequential mixed-methods approach to evaluating clinician acceptability

- during implementation of a standardized labor induction protocol. *BMC Medical Research Methodology* 23. <https://doi.org/10.1186/s12874-023-02010-7>
- Han, Y & Jamaludin, K. (2025). The Implementation of Apprenticeship in Vocational Education: A Systematic Review. *International Journal of Academic Research in Progressive Education and Development*. 14. 10.6007/IJARPED/v14-i3/26048.
- Handayani, M., Ali, M., Wahyudin, D., Mukhidin, & Ijost, I. (2020). Green Skills Understanding of Agricultural Vocational School Teachers around West Java Indonesia. *Indonesian Journal of Science and Technology*. 5. 21–30. 10.17509/ijost.v5i1.22897.
- Handoko, B. L. (2020, August). UTAUT 2 model for entrepreneurship students on adopting technology. In *2020 International Conference on Information Management and Technology (ICIMTech)* (pp. 191–196). IEEE.
- Hanif, S. (2023). Developing Organizational Change Capabilities using ADKAR model of Change: The Efficacy of Context Sensitive Training. *Journal of Workplace Behavior*. 4. 2023. 10.70580/jwb.04.01.0176.
- Hao, R, Feng, Z., Liu, H, Wang, S, & Wei, Y. (2021). Study on Modular Curriculums in Vocational Education and Training System. 10.1007/978-3-030-84383-0_3.
- Hays, R. D., Hubble, D., Jenkins, F., Fraser, A., & Carew, B. (2021). Methodological and Statistical Considerations for the National Children's Study. *Frontiers in pediatrics*, 9, 595059. <https://doi.org/10.3389/fped.2021.595059>
- HCLS. (2025). *How Public-Private Partnerships can drive workforce readiness in South Africa*. <https://hcls.co.za/public-private-partnerships-drive-workforce-readiness-in-south-africa/>
- He, L., Zheng, L. J., Sharma, P., & Leung, T. Y. (2024). Entrepreneurship education and established business activities: An international perspective. *International Journal of Management Education*, 22(1). <https://doi.org/10.1016/j.ijme.2023.100922>
- He, Y., Chen, Y., 2024. The Impact of Agricultural Cooperatives on Farmers' Agricultural Revenue: Evidence from Rural China. *Sustainability* 16, 10979. <https://doi.org/10.3390/su162410979>
- Henning, J., Jammer, B., & Jordaan, H. (2022). Youth participation in agriculture, accounting for entrepreneurial dimensions. *The Southern African Journal of Entrepreneurship and Small Business Management*, 14(1), 14 pages. doi:<https://doi.org/10.4102/sajesbm.v14i1.461>
- Henning, J.I.F. & Jordaan, H. (2024). *Entrepreneurial development for establishing small-scale rain-fed crop farming businesses and employment by youth in rain-fed crop farming: Free State Province case study* (WRC Report No. 2789/2/23). Pretoria: Water Research

Commission (WRC)

- Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science and Medicine*, 292. <https://doi.org/10.1016/j.socscimed.2021.114523>
- Hidayana, N. (2025). Assessment of Validity, Reliability, and Normality in Quantitative Study: A Survey Instrument Analysis with IBM SPSS. *Asian Journal of Research in Education and Social Sciences*. 7. 438–452. 10.55057/ajress. 2025.7.3.37.
- Hidayat, M. & Widodo, A. (2022). The Influence of Human Capital on Organizational Performance. *Die*. 13. 195–205. 10.30996/die.v13i2.7301.
- Hippach-Schneider, U. (2025). Incorporating apprentices' perspectives in vocational education and training monitoring: A comparative analysis of Germany, Switzerland, and Denmark. *Vocation, Technology & Education*. 10.54844/vte. 2025.0947.
- Hlatjwako, S, Makwara, T, Sibanda, L, & Ndlovu, E. (2025). Professional Development of Lecturers at South African TVET Colleges through Coaching and Mentoring. 12. 427–436. 10.5281/zenodo.15804590.
- Hoogstraaten, M. J., Frenken, K., & Boon, W. P. C. (2020). The study of institutional entrepreneurship and its implications for transition studies. *Environmental Innovation and Societal Transitions*, 36, 114–136. <https://doi.org/10.1016/j.eist.2020.05.004>
- Hu, B., Zheng, Q., Wu, J., Tang, Z., Zhu, J., Wu, S., & Ling, Y. (2021). Role of Education and Mentorship in Entrepreneurial Behavior: Mediating Role of Self-Efficacy. *Frontiers in psychology*, 12, 775227. <https://doi.org/10.3389/fpsyg.2021.775227>
- Hu, Z., Chang, Y. F., & Ho, M. K. (2024). A comparative study on the effectiveness of blended learning, physical learning, and online learning in functional skills training among higher vocational education. *STEM Education*, 4(3), 247–262. <https://doi.org/10.3934/steme.2024015>
- Huh, I., & Gim, J. (2025). Exploration of Likert scale in terms of continuous variable with parametric statistical methods. *BMC medical research methodology*, 25(1), 218. <https://doi.org/10.1186/s12874-025-02668-1>
- Human Sciences Research Council (HSRC). (2022). *Municipal skills and capacity assessment study: Views from municipal officials at eight South African municipalities*.
- Human Sciences Research Council. (2025). Reimagining technical and vocational training in the digital age. HSRC. <https://hsrc.ac.za/news/equitable-education-and-economies/reimagining-technical-and-vocational-training-in-the-digital-age/>

- Hussain, S., & Islam, M. D. S., & Hannan, M. A., & Sayeed, T., & Ali, M. (2025). Deep Learning-Enhanced Augmented Reality for Real-Time Welding Training and Defect Detection. 10.2139/ssrn.5088028.
- Hussein, M. G. (2024). Exploring the significance of soft skills in enhancing employability in the job market. *SAGE Open*, 14(1), 21582440241271941. <https://doi.org/10.1177/21582440241271941>
- Ilonen, S. (2021). Creating an entrepreneurial learning environment for entrepreneurship education in HE: The educator's perspective. *Industry and Higher Education*, 35. 095042222110206. 10.1177/09504222211020637.
- International Labour Organization & African Union. (2024). *AU-ILO Youth Employment Strategy for Africa (YES-Africa)*. ILO / AU. <https://www.ilo.org/sites/default/files/2024-09/AU-ILO%20Youth%20Employment%20Strategy%20for%20Africa.pdf>
- International Labour Organization. (2022). *Greening TVET and skills development: A practical guidance tool*. Geneva: ILO.
- International Labour Organization. (2023). *Good practices in apprenticeships in South Africa: Challenges and opportunities* (ADULT project report). ILO. https://www.ilo.org/sites/default/files/wcmsp5/groups/public/%40ed_emp/%40ifp_skills/documents/publication/wcms_872252.pdf
- Ismail, Z., & Mujuru, S. (2020). *Workplace-based learning and youth employment in Africa*. INCLUDE Knowledge Platform. <https://includeplatform.net/wp-content/uploads/2020/04/Ismail-Mujuru-2020-WBL-and-Youth-Employment-in-Africa.pdf>
- Iyer, R., Maralapalle, V., & Mahesh, P. (2025). Virtual Reality (VR) and Augmented Reality (AR) in Vocational Training. 10.4018/979-8-3693-8252-3.ch004.
- James Relly, S., & Laczik, A. (2021). Apprenticeship, employer engagement and vocational formation: a process of collaboration. *Journal of Education and Work*, 35(1), 1–15. <https://doi.org/10.1080/13639080.2021.1983524>
- Jennifer, W. (2023). Tangible resources and effective e-learning implementation in selected Ugandan public universities. *Education Quarterly Reviews*, 6(3). <https://doi.org/10.31014/aior.1993.06.03.758>
- Jepperson, R. & Meyer, J. (2021). Institutional Theory: The Cultural Construction of Organizations, States, and Identities. 10.1017/9781139939744.
- Jerald, H., Chinengundu, T., Vijayaratham, P., & Rajanthran, S. K. (2024). *Greening TVET for*

- sustainable skill development: Opportunities and challenges in Botswana with a focus on quality education.* Journal of Ecohumanism, 3(8), 2979–2985.
<https://repository.up.ac.za/bitstreams/4764cc1a-f0b7-47db-87c5-f447371e0187/download>
- Jia, F., Zhang, R., Li, J. (2023). The impact of continuous use intention of cooperative members on new agricultural technologies. *Frontiers in Psychology* 14.
<https://doi.org/10.3389/fpsyg.2023.1089362>
- Jiatong, W., Murad, M., Bajun, F., Tufail, M.S., Mirza, F., Rafiq, M. (2021). Impact of Entrepreneurial Education, Mindset, and Creativity on Entrepreneurial Intention: Mediating Role of Entrepreneurial Self-Efficacy. *Frontiers in Psychology* 12.
<https://doi.org/10.3389/fpsyg.2021.724440>
- Jordaan, J., Du Preez, L., & Keyter, M. (2025). ENHANCING WORK-READINESS AND EMPLOYABILITY OF AGRICULTURAL GRADUATES THROUGH A WORK-INTEGRATED LEARNING PROGRAM, in: International Conference on Agriculture. International conference on agriculture. <https://doi.org/10.17501/26827018.2024.9102>
- Kang H. (2021). Sample size determination and power analysis using the G*Power software. *Journal of educational evaluation for health professions*, 18, 17.
<https://doi.org/10.3352/jeehp.2021.18.17>
- Kangogo, D., Dentoni, D., Bijman, J. (2020). Determinants of Farm Resilience to Climate Change: The Role of Farmer Entrepreneurship and Value Chain Collaborations. *Sustainability* 12, 868. <https://doi.org/10.3390/su12030868>
- Kapazoglou, M., Betke, J., & Bolling, R. (2023). *Strengthening programming and policymaking for inclusive youth agripreneurship in Africa: An insights report*. INCLUDE / Netherlands Food Partnership / The Broker. <https://includeplatform.net/wp-content/uploads/2023/02/Strengthening-programming-and-policymaking-for-inclusive-youth-agripreneurship-in-Africa.pdf>
- Kar, B. (2025). Theories in the Intersection of Agriculture and Entrepreneurship. 20. 247-266. 10.23862/kiit-parikalpana/2024/v20/i2/226726.
- Karbhari, Y., Alam, M., & Rahman, M. (2020). Relevance of the application of institutional theory in Shariah governance of Islamic banks. *PSU Research Review*, 5(1), 1, 15.
<https://doi.org/10.1108/prr/prr/prr/prr, 05, 2020, 0015>
- Kemper, J., Au Yong Lyn, A., McDonald, P., & Renold, U. (2025). Labor market outcomes of formal vocational education and training: a meta-analysis. *Education Economics*, 1–25.

<https://doi.org/10.1080/09645292.2025.2579799>

- Kerari, A., Bahari, G., Aldossery, N., Qadhi, O., & Alghamdi, A. (2022). A Mixed-Methods Sequential Explanatory Study of the Factors That Impact Nurses' Perspectives toward Nurse Practitioners' Roles in Saudi Arabia. *Healthcare, 11*(1), 146. <https://doi.org/10.3390/healthcare11010146>
- Kgalema, V., Marock, C., & Allais, S. (2021). The Alignment of Black Economic Empowerment and Skills Policies in South Africa. University of Witwatersrand and Southern Centre for Inequality Studies.
- Khambule, S. (2024). *The role of mentorship in building entrepreneurial resilience and its influence on entrepreneurial action* (MBA dissertation, University of Pretoria). University of Pretoria Institutional Repository. <https://repository.up.ac.za/bitstreams/269a8134-6505-443a-8bf7-e4da30b09d0b/download>
- Khetsha, Z., & Makhoahle, P. (2023). Factors affecting Work Integrated Learning student placement process for the Agricultural Management programme at Central University of Technology, Free State. 160–171. 10.2991/978-2-38476-134-0_11.
- Khunoethe, H., & Reddy, P. S. (2023). Challenges in South Africa's post-school education and training system on local government performance. *Administratio Publica, 31*(3), 17–39.
- Kiger, M. E., & Varpio, L. (2020). Thematic analysis of qualitative data: AMEE Guide No. 131. *Medical teacher, 42*(8), 846–854. <https://doi.org/10.1080/0142159X.2020.1755030>
- Kirui, O. (2020). Skills development for value chain actors in African agriculture. In D. Resnick, X. Diao & G. Tadesse (Eds.), *Sustaining Africa's agrifood system transformation: The role of public policies* — ReSAKSS 2020 Annual Trends and Outlook Report. AKADEMIYA2063 / ReSAKSS.
- Kiruthika, U., Subramanian, K. S. Raja & Valusa, Bhavani. (2024). Work-Integrated Learning: Elevating Educational Outcomes and Career Prospects in Higher Education. 1–7. 10.1109/TALE62452.2024.10834375.
- Kiss, V., Khademi-Vidra, A., & Bakos, Izabella. (2025). The strategic role of agricultural vocational training in sustainable local food systems. *Open Agriculture, 10*. 10.1515/opag-2025-0461.
- Kolho, P. (2024). A vocational education and training subject teacher for fostering students' entrepreneurial skills—The development of a conceptual model. *International Journal of Training and Development, 28*(4), 430–453. <https://doi.org/10.1111/ijtd.12335>

- Kolho, P., Oikkonen, E., & Pihkala, T. (2022). Entrepreneurship education practices in VET: The roles of the teacher and the local region. *Nordic Journal of Vocational Education and Training*, 12(2), 50–74. <https://doi.org/10.3384/njvet.2242-458x.2212250>
- Korkie, Y., Beyers, C., Swanepoel, E. (2025). Teaching inclusive education: a contextual higher education analysis. *Frontiers in Education* 10. <https://doi.org/10.3389/educ.2025.1445612>
- Kroes, A. & Finley, J. (2023). Demystifying Omega Squared: Practical Guidance for Effect Size in Common Analysis of Variance Designs. *Psychological Methods*. 30. 866–887. 10.1037/met0000581.
- Kumalo, S. (2021). Developing epistemic impartiality to deliver justice in higher education South Africa. *Education Citizenship and Social Justice*, 18(1), 85–97. <https://doi.org/10.1177/17461979211048665>
- Kumar, K., Boesso, G., Batra, R., & Yao, J. (2021). Cross-national differences in stakeholder management: Applying institutional theory and comparative capitalism framework. *Business Strategy and the Environment*, 30(5), 2354–2366. <https://doi.org/10.1002/bse.2750>
- Lambert, L. S., & Newman, D. A. (2022). Construct development and validation in three practical steps: Recommendations for reviewers, editors, and authors (IASC MR). <https://iacmr.org/wp-content/uploads/sites/26/2024/05/3-lambert-newman-2022-construct-development-and-validation-in-three-practical-steps-recommendations-for-reviewers-editors.pdf>
- Larasati, N., Putri, A. A., Soemodinoto, A. S., Alyssa, N., & Shoofiyan, O. S. (2024). Unified theory of acceptance and use of technology model to understand farmer's readiness: Implementation of precision agriculture based on digital IoT monitoring apps in West Java, Indonesia. *Asian Journal of Agriculture and Rural Development*, 14(4), 176–183. <https://doi.org/10.55493/5005.v14i4.5258>
- Lavrenenko, V., Makhova, H., & Vostriakova, V. (2021). Development of the enterprise's innovative potential on the basis of resource theory. *Financial and Credit Activity Problems of Theory and Practice*, 3(38), 397–408. <https://doi.org/10.18371/fcaptp.v3i38.237473>
- Lawal, S. & Isah, S. (2025). BRIDGING THE SKILLS GAP THROUGH TVET PUBLIC-PRIVATE PARTNERSHIPS: A CONCEPTUAL FRAMEWORK FOR INDUSTRY-ACADEMIA COLLABORATION. *Gusau Journal of Business Administration*. 4. 246–

253. 10.57233/gujoba.v4i1.25.
- Le, H., Sok, S., & Heng, K. (2024). The benefits of peer mentoring in higher education: findings from a systematic review—*Journal of Learning Development in Higher Education*. 10.47408/jldhe.vi31.1159.
- Lekutle, N. (2023). The effects of entrepreneurship leadership on youth entrepreneurial intentions post COVID-19: the case of Gauteng. *Businesses*, 3(4), 569–584. <https://doi.org/10.3390/businesses3040035>
- Leong, D. (2020). Entrepreneurial Energy in a Far-From-Equilibrium Opportunity Driving Entrepreneurial Actions... <https://doi.org/10.31124/advance.13363421.v1>
- Leong, W. Y. (2025). Artificial Intelligence, Automation, and Technical and Vocational Education and Training: Transforming Vocational Training in Digital Era. *Engineering Proceedings*, 103(1), 9. <https://doi.org/10.3390/engproc2025103009>
- Letshaba, R.K., Mahosi, B.N., Sibiya, A. (2025). Does entrepreneurship education invigorate opportunity recognition and exploitation?. *The Southern African Journal of Entrepreneurship and Small Business Management* 17. <https://doi.org/10.4102/sajesbm.v17i1.1068>
- Li, J. (2023). *International transfer of vocational education and training*. *International Journal of Training Research*, 21(4), 390-406. <https://doi.org/10.1080/13636820.2020.1847566>
- Liang, X., & Comyn, P. (2025). *Industry engagement in TVET and skills development*. Skills4Dev Knowledge Digest, Issue 15. The World Bank. <https://doi.org/10.1596/IDU-e89da132-8e31-45d9-9d91-79d3eda209cd>
- Liebenberg, S. (2023). Applying a human rights lens to poverty and economic inequality: the experience of the South African human rights commission. *Federal Law Review*, 51(3), 296, 314. <https://doi.org/10.1177/0067205x231188637>
- Lombo, N., & Subban, M. (2024). Physical Infrastructure Challenges in Rural Schools: Reflections to Promote Quality Education INTRODUCTION AND BACKGROUND. In *Administratio Publica* | (Vol. 32).
- Long, Y., Zhang, X., & Zeng, X. (2025). Application and effect analysis of virtual reality technology in vocational education practical training. *Education and Information Technologies* 30, 9755–9786. <https://doi.org/10.1007/s10639-024-13197-7>
- López, F., Contreras, M., Nussbaum, M., Paredes, R., Gelerstein, D., Alvares, D., Chiuminatto, P. (2023). Developing Critical Thinking in Technical and Vocational Education and Training. *Education Sciences* 13, 590. <https://doi.org/10.3390/educsci13060590>

- Loqmane, H. (2025). The Impact of Employee Training on Job Satisfaction. *International Journal of Sciences Basic and Applied Research (IJSBAR)*. Vol. 77. 226–239.
- Lose, T. (2021). Business incubators in South Africa: A resource-based view perspective. *Academy of Entrepreneurship Journal*, 27(Special Issue 1), 443. (abacademies.org)
- Loxton, M., Truskett, R., Scarf, B., Sindone, L., Baldry, G., Zhao, Y. (2020). Consumer Behaviour during Crises: Preliminary Research on How Coronavirus Has Manifested Consumer Panic Buying, Herd Mentality, Changing Discretionary Spending and the Role of the Media in Influencing Behaviour. *Journal of Risk and Financial Management* 13, 166. <https://doi.org/10.3390/jrfm13080166>
- Ludwiczak, A. K. (2025). The functional value of active learning as assessed by business and economics students. *Management*, 1, 802–825. <https://doi.org/10.58691/man/207587>
- Mabaso, C., Ontong, A. (2025). Advancing economic growth through human capital development in the era of the Fourth Industrial Revolution. *SA Journal of Human Resource Management* 23. <https://doi.org/10.4102/sajhrm.v23i0.3080>
- Mack, A. (2024). Funding and its impact on the administration and organisational efficiency of technical vocational education and training institutions. *Discover Education*. 3. 10.1007/s44217-024-00305-5.
- Madambi, S. (2025). Introducing occupational qualifications in the South African Technical Vocational Education and Training Colleges: The challenges. *Journal of Education (University of KwaZulu-Natal)*, (100), 192–206. <https://doi.org/10.17159/2520-9868/i100a11>
- Madzivhandila, M., & Maswera, G. (2023). South African public sector post-apartheid economic policy and industrial structure: Evidence from MERJ Article 842. *MERJ*, Article 842. <https://www.hataso.com/journals/merj/articles/842/pdf>
- Magadla, A., Darko, M. T., & Enow, S. (2024). The role of small-scale agricultural business on youth employment at a selected district in the Eastern Cape, South Africa. *Open Journal of Business and Management*, 12(3). <https://doi.org/10.4236/ojbm.2024.123>
- Mahlahla, T. T., & Hlatshwayo, M. (2024). Evaluation to performance management in the South African public service. *International Journal of Research in Business and Social Science*, 13(2), 136–147. <https://doi.org/10.20525/ijrbs.v13i2.3167>
- Mahmudin, T. (2023). The Importance of Entrepreneurship Education in Preparing the Young Generation to Face Global Economic Challenges. *Journal of Contemporary Administration and Management (ADMAN)*, 1(3), 187–192.

<https://doi.org/10.61100/adman.v1i3.78>

- Maïga, W.H.E., Porgo, M., Zahonogo, P., Amegnaglo, C.J., Coulibaly, D.A., Flynn, J., Seogo, W., Traoré, S., Kelly, J.A., Chimwaza, G. (2020). A systematic review of employment outcomes from youth skills training programmes in agriculture in low- and middle-income countries. *Nature Food* 1, 605–619. <https://doi.org/10.1038/s43016-020-00172-x>
- Mailula, T. (2024). Agricultural Skills Development as a Catalyst for Youth Employment and Entrepreneurship: A Case Study of Madibeng Municipality. 10.13140/RG.2.2.35539.69925.
- Majola, E., 2025. National Certificate Vocational graduates and barriers to progression in South African Technical Vocational Education and Training. *Transformation in Higher Education* 10. <https://doi.org/10.4102/the.v10i0.579>
- Maka, L. (2023). Entrepreneurship education in South Africa: policy implementation and impact on youth empowerment. <https://doi.org/10.20944/preprints202308.1826.v2>
- Makamane, A., & Khetsa, Z. (2024). Enhancing Rural Livelihoods and Empowering Youth Through Agripreneurship: An Analysis of the Comprehensive Rural Development Programme in QwaQwa, Free State, South Africa. *International Journal of Applied Research in Business and Management*. 5. 10.51137/ijarbm.2024.5.2.24.
- Makole, K. R., Moeti, K. B., & Ntshangase, B. A. (2023). Repurposing public Technical Vocational Education and Training Colleges in South Africa: A response to the National Development Plan on reskilling youth and learners with technical skills. *African Journal of Public Affairs*, 14(1), 43–63. https://doi.org/10.10520/ejc-ajpa_v14_n1_a4 (ujcontent.uj.ac.za)
- Makwana, D., Engineer, P., Dabhi, A., & Chudasama, H. (2023). Sampling Methods in Research: A Review. 7. 762–768.
- Maltseva, V, Nikitin, M, Mehrotra, S, & Li, J. (2025). Private-Public Partnership in TVET: An Overview of Current Practices in the BRICS Countries. *Voprosy Obrazovaniya/ Educational Studies Moscow*. 92–117. 10.17323/vo-2025-24091.
- Manara, M. U., Nübold, A., van Gils, S., & Zijlstra, F. R. H. (2023). Exploring the path to corruption-An informed grounded theory study on the decision-making process underlying corruption. *PloS one*, 18(9), e0291819. <https://doi.org/10.1371/journal.pone.0291819>
- Manasoe, B., Mmbengwa, V., Lekunze, J. (2024). The Influence of Capacity Building on Small-Scale Agro-Processors in South Africa: Lessons for Agricultural Extension Advisory

- Services. South African Journal of Agricultural Extension (SAJAE) 52, 55–84.
<https://doi.org/10.17159/2413-3221/2024/v52n3a15543>
- Mandeya, S. & Ho, S. (2021). Inflation, inflation uncertainty and the economic growth nexus: an impact study of South Africa. *Methods*, 8, 101501.
<https://doi.org/10.1016/j.mex.2021.101501>
- Manenzhe, P.M., Ngirande, H. (2021). The influence of compensation, training and development on organisational citizenship behaviour. *SA Journal of Industrial Psychology* 47.
<https://doi.org/10.4102/sajip.v47i0.1845>
- Marinič, P. (2023). AGRICULTURE 4.0 AND AGRICULTURAL VOCATIONAL EDUCATION AND TRAINING. *AD ALTA: Journal of Interdisciplinary Research*. 13. 10.33543/j.1302.334337.
- Masoomi, E. & Zamani, N. (2020). Determinants of entrepreneurial opportunity recognition by agricultural entrepreneurs. *International Journal of Entrepreneurship and Small Business*. 41. 279. 10.1504/IJESB.2020.109938.
- Matabane, M. E., Matabane, R. B., Moloi, T., & Sibaya, K. T. (2022). The Exploring Factors that Teachers View as Hindering Quality in Teaching and Learning at a TVET College. *Research in Educational Policy and Management*, 4(1), 51–64.
<https://doi.org/10.46303/repam.2022.9>
- Mateus, S. & Shange, K. (2021). Broken & unequal: the South African education system and the attainment of the right to basic education through litigation. *Pretoria Student Law Review*, 15(1). <https://doi.org/10.29053/pslr.v15i1.3675>
- Matha, Q. P., & Jahed, M. I. (2024). A Critique of the Techniques Used by the Sectorial Education and Training Authorities to Detect Skills Shortages in South Africa. *Administratio Publica*, 32(4), 156–175. <https://doi.org/10.61967/adminpub.2024.32.4.8>
- Mathinya, V. N., Franke, A. C., Van De Ven, G. W. J., & Giller, K. E. (2022). *Productivity and constraints of small-scale crop farming in the summer rainfall region of South Africa*. *Outlook on Agriculture*, 51(2), 139–154. <https://doi.org/10.1177/00307270221091839>
- Mathinya, V.N., Franke, A.C., Van De Ven, G.W.J., Giller, K.E., Andersson, J.A. (2025). Are Aspirations of Rural Households Aligned with National Rural Development Policies? Understanding Aspirations of Small-Scale Farming Households in the Former Homelands of South Africa. *The European Journal of Development Research* 37, 885–908.
<https://doi.org/10.1057/s41287-025-00709-5>
- Matsheta, R. & Sefoka, I. (2023). Load shedding in South Africa: an immediate threat to the right

- to education, “section 29 inquiry”. *Journal of Educational and Social Research*, 13(1), 216. <https://doi.org/10.36941/jesr, 2023, 0020>
- Maya Ortiz, E. J. (2024). An Integrated Competency-Based Framework for Employability and the Sustainability of Higher Education. *Sustainability*, 17(22), 10340. <https://doi.org/10.3390/su172210340>
- Mbiakop, W. (2023). The impact of public agricultural spending on foreign direct investment inflows in agriculture in South Africa: an ARDL analysis. *International Journal of Economics and Financial Issues*, 13(5), 76–87. <https://doi.org/10.32479/ijefi.15008>
- McGahan, A.M. (2021). Integrating Insights from the Resource-Based View of the Firm into the New Stakeholder Theory. *Journal of Management* 47, 1734–1756. <https://doi.org/10.1177/0149206320987282>
- McGrath, S., & Yamada, S. (2023). Skills for development and vocational education and training: current and emergent trends. *International Journal of Educational Development*, 102, 102853. <https://doi.org/10.1016/j.ijedudev.2023.102853>
- McGrath, S., Ramsarup, P., Zeelen, J., Wedekind, V., Allais, S., Lotz-Sisitka, H., Monk, D., Openjuru, G., Russon, J.A. (2020). Vocational education and training for African development: a literature review. *Journal of Vocational Education & Training* 72, 465–487. <https://doi.org/10.1080/13636820.2019.1679969>
- McGrath, S., Russon, J.A. (2023). TVET SI: Towards Sustainable Vocational Education and Training: Thinking beyond the formal. *Southern African Journal of Environmental Education* 39. <https://doi.org/10.4314/sajee.v39.03>
- Mende, C., Oswald-Egg, M. E., & Caves, K. (2025). Vocational education and training (VET) system governance: a systematic literature review. *Journal of Vocational Education & Training*, 77(5), 1419–1453. <https://doi.org/10.1080/13636820.2025.2461586>
- MerSETA. (2021). Learnerships. Manufacturing, Engineering and Related Services Sector Education and Training Authority. Retrieved April 12, 2025, from <https://www.merseta.org.za/skills-development/curriculum-learning-programmes/learnerships/>
- Mesuwini, J., Ganya, E., & Mlotshwa, S. (2025). Greening Initiatives for TVET Colleges Through Innovative Curriculum and Technology: A Case of TVET College Perspective. 10.4018/979-8-3693-8915-7.ch012.
- Mesuwini, J., Thaba-Nkadimene, K. L., Mzindle, D., & Mokoena, S. (2023). Work-integrated learning experiences of South African technical and vocational education and training

- lecturers. *International Journal of Work-Integrated Learning*, 24(1), 83–97.
- Mey, M. R., Poisat, P., Stindt, C., & Mey, M. (2021). *SA Journal of Human Resource Management*. <https://doi.org/10.4102/sajhrm>
- Mgendi, G., Mao, S., Qiao, F., 2021. Is a Training Program Sufficient to Improve the Smallholder Farmers' Productivity in Africa? Empirical Evidence from a Chinese Agricultural Technology Demonstration Center in Tanzania. *Sustainability* 13, 1527. <https://doi.org/10.3390/su13031527>
- Mgweba, L., & Lungisa, S. (2024). Impact of entrepreneurial incubators on youth employment in South African local government. *The Southern African Journal of Entrepreneurship and Small Business Management*. 16. 10.4102/sajesbm.v16i1.911.
- Mhlabane, A. & Nishimwe, N. R. (2022). Impact of Foreign Direct Investment and Domestic Investment on economic growth in South Africa: A time series analysis. *Issues in Social and Environmental Accounting*: 2460, 6081 Special Issue Volume 1, pp 140, 149
- Mhlongo, T., Daya, P. (2023). Challenges faced by small, medium and micro enterprises in Gauteng: A case for entrepreneurial leadership as an essential tool for success. *The Southern African Journal of Entrepreneurship and Small Business Management* 15. <https://doi.org/10.4102/sajesbm.v15i1.591>
- Michailidis, A., Charatsari, C., Bournaris, T., Loizou, E., Paltaki, A., Lazaridou, D., Lioutas, E.D. (2024). A First View on the Competencies and Training Needs of Farmers Working with and Researchers Working on Precision Agriculture Technologies. *Agriculture* 14, 99. <https://doi.org/10.3390/agriculture14010099>
- Miørner, J. (2020). The road towards autonomous driving – A differentiated view of institutional agency in path transformation, *Norsk Geografisk Tidsskrift. Norwegian Journal of Geography*, 74(5): 283, 295, DOI: [10.1080/00291951.2020.1770852](https://doi.org/10.1080/00291951.2020.1770852)
- Misko, J., Guthrie, H., & Waters, M. (2021). *Building capability and quality in VET teaching: Opportunities and challenges* (NCVER Research Report). National Centre for Vocational Education Research. https://www.ncver.edu.au/data/assets/pdf_file/0033/9662271/Building_capability_quality_VET_teaching_Revision.pdf
- Mncwango, S, Adanlawo, E.F., & Vezi-Magigaba, M. (2024). Training interventions that enhance entrepreneurship self-efficacy among unemployed youth: A South Africa perspective. *International Journal of Business Ecosystem & Strategy* (2687–2293). 6. 113–121. 10.36096/ijbes.v6i4.653.

- Mncwango, S. I., & Adanlawo, E. F. (2025). Reducing youth unemployment through entrepreneurship education interventions: The case of South Africa. *Educational Process: International Journal*, 16, e2025261. <https://doi.org/10.22521/edupij.2025.16.261>
- Modupe, A., & Adesoba, E. (. (2023). Vocational Agricultural Training as a Pathway to Economic Empowerment and Food Security: Lessons from West Africa. *International Journal of Agriculture and Earth Science*. <https://doi.org/10.56201/ijaes.vol.9.no7.2023.pg229.238>
- Moganedi, J, & Mkhize, N. (2023). *Skills development programme for the empowerment of women in rural communities in KwaZulu-Natal, South Africa: Lessons learnt from the COVID-19 pandemic*. www.oidaijsd.com Also available at <https://www.ssrn.com/index.cfm/en/oida-intl-journal-sustainable-dev/>
- Mokgolo, M & Dikotla, M & Chigo, E. (2024). Efficacy of continuous employee learning and development in the South African public service between 2014 to 2023 era. *Journal of Infrastructure, Policy and Development*. 8. 5496. 10.24294/jipd.v8i9.5496.
- Molele, M.B., Khoza, S.D., Skosana, N.M. (2024). Identifying the Gaps in the Management of Work Integrated Learning Among TVET College National Certificate (Vocational) Students. *Jurnal Penelitian dan Pengkajian Ilmu Pendidikan: e-Saintika* 8, 1–16. <https://doi.org/10.36312/esaintika.v8i1.1199>
- Moni, N. & Chipunza, C. (2021). Personality as a predictor of human resource management strategy among small and medium enterprise owners and managers in South Africa. *Journal of Contemporary Management*, 18(1), 141, 172. <https://doi.org/10.35683/jcm20033.100>
- Mosia, P. & Lephoto, M. (2023). Non-governmental and Community-Based Organisations as Enablers of Inclusion in Education. 10.1007/978-3-031-43752-6_15.
- Motala, S., Ngandu, S., & Mncwango, B. (2021). *ETDP SETA track and trace evaluation study of bursaries, learnerships, internships and work-integrated learning for TVET and UoT learners* (Tracer Study Report, 30 July 2021). Education, Training and Development Practices Sector Education and Training Authority (ETDP SETA). <https://www.etdpseta.org.za/etd/sites/default/files/2023-01/Tracer%20Study%20Report%20-%2030%20July%202021%20-.pdf>
- Mseleku, Z., 2024. Transitioning from higher education to the labour market: the role of graduate internship on youth graduate employability. *Cogent Education* 11.

<https://doi.org/10.1080/2331186x.2024.2428069>

- Mthimunya, J., & Malatji, K. (2024). Assessing the Symbiotic Relationship between National Development Plan 2030 and the Technical Vocational Education and Training Colleges National Certificate Vocational (NCV) programme. *E-Journal of Humanities, Arts and Social Sciences*. 123–134. 10.38159/ehass.2024525.
- Mtotoya, M., & Motaung, M. (2024). Effects of poverty challenges on youth learnership success. *Development Southern Africa*, 41(3), 628–648. <https://doi.org/10.1080/0376835X.2024.2352071>
- Mugambi, M., Makato, B., & Kalai, J. (2022). Socioeconomic Determinants of Trainees' Enrolment and Participation in Public TVETS in Nakuru County, Kenya. *International Journal of Scientific Research and Management*. 10. 2664–2680. 10.18535/ijssrm/v10i12.el04.
- Mukesh, H.V., Shetty, J., Kenny, B., McGuirk, H. (2024). Value for Value: Social Entrepreneurship Education Through Value Creation Extracurricular Activity. *Journal of Social Entrepreneurship* 1–26. <https://doi.org/10.1080/19420676.2024.2413071>
- Muskhir, M., Luthfi, A., Watrionthos, R., & Usmeldi, U. (2024). Emerging research on virtual reality applications in vocational education: A bibliometric analysis. *Journal of Information Technology Education: Innovations in Practice*, 23, Article 005. <https://doi.org/10.28945/5284>
- Mustajab, D., & Irawan, A. (2023). The Effectiveness of Vocational Training Programs on Employment Outcomes. *Advances in Community Services Research*. 1. 37–46. 10.60079/acsr.v1i2.344.
- Muthanna, A., & Alduais, A. (2023). The Interrelationship of Reflexivity, Sensitivity and Integrity in Conducting Interviews. *Behavioral sciences (Basel, Switzerland)*, 13(3), 218. <https://doi.org/10.3390/bs13030218>
- Muwaniki, C. (2022). Curriculum reform in agricultural vocational education and training: Investigating whether the existing AET curriculum responds to the changing needs of stakeholders and the changing role. *Journal of Vocational, Adult and Continuing Education and Training (JOVACET)*, 5(1), Article 7. https://doi.org/10.10520/ejc-jovacet_v5_n1_a7
- Muwaniki, C., McGrath, S., Manzeke-Kangara, M. G., Wedekind, V., & Chamboko, T. (2022). Curriculum reform in agricultural vocational education and training in Zimbabwe: Implementation challenges and possibilities. *Journal of Vocational, Adult and Continuing*

- Muwaniki, C., Wedekind, V., & McGrath, S. (2024). Agricultural vocational education and training for sustainable futures: responsiveness to the climate and economic crisis in Zimbabwe. *Journal of Vocational Education & Training* 76, 430–446. <https://doi.org/10.1080/13636820.2024.2317163>
- Muzuva, M. & Balkaran, R. & Rawjee, Veena. (2024). AN EXPLORATION OF THE EFFECTS OF FOREIGN DIRECT INVESTMENTS ON SOUTH AFRICA'S ECONOMIC GROWTH. *Il Ponte*. 80. 1-17. 10.21525/j.ponte.2024.05.11.
- Mwansa, G & Ngandu, M & Mkwambi, Z. (2025). Bridging the digital divide: exploring the challenges and solutions for digital exclusion in rural South Africa. *Discover Global Society*. 3. 10.1007/s44282-025-00189-2.
- Mwita, K & Mwilongo, N & Mwamboma, I. (2024). The role of soft skills, technical skills and academic performance on graduate employability. *International Journal of Research in Business and Social Science* (2147-4478). 13. 767-776. 10.20525/ijrbs.v13i5.3457.
- Mxunyelwa, S., Dinesh, 2025. Lack of government support: A hindrance to entrepreneurship development of SMTE sector in Buffalo City, South Africa. *Africa's Public Service Delivery and Performance Review* 13. <https://doi.org/10.4102/apsdpr.v13i1.853>
- Nade, P.B., Malamsha, C.K. (2021). The influence of agri-entrepreneurship courses studied on youth farm entrepreneurial intention: Evidence from Folk Development Colleges in Tanzania. *South African Journal of Economic and Management Sciences* 24. <https://doi.org/10.4102/sajems.v24i1.3788>
- Nadeem Ch. (2025). The Effect of Public Sector Training on Employee Productivity and Service Quality: The Mediating Role of Job Satisfaction.
- Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A Step-by-Step Process of Thematic Analysis to Develop a Conceptual Model in Qualitative Research. *International Journal of Qualitative Methods*. <https://doi.org/10.1177/16094069231205789>
- Nagano, H. (2020). The growth of knowledge through the resource-based view. *Management Decision*. 58. 98–111. 10.1108/MD-11-2016-0798
- Naidu-Valentine, R. (2024). TRIANGULATION IN MIXED METHOD RESEARCH DESIGN.
- Nalmpanti, A. D., Wong, C. Y., & Oghazi, P. (2024). Collaborating for innovation: The inhibiting role of constraints. *Journal of Innovation and Knowledge*, 9(3). <https://doi.org/10.1016/j.jik.2024.100504>
- Nama, K., Daweti, B., Lourens, M., & Chikukwa, T. (2022). The impact of training and

- development on employee performance and service delivery at a local municipality in South Africa. *Problems and Perspectives in Management*, 20(4), 42–51. [https://doi.org/10.21511/ppm.20\(4\).2022.04](https://doi.org/10.21511/ppm.20(4).2022.04)
- Namazova, N. (2025). Perspective Chapter: The Role of Social Influence on Consumer Behavior. 10.5772/intechopen. 1010384.
- National Skills Fund. (2023). *NSF Annual Report 2022/23*. Department of Higher Education and Training
- Naveed, Q. N., Choudhary, H., Ahmad, N., Alqahtani, J., & Qahmash, A. I. (2022). Mobile Learning in Higher Education: A Systematic Literature Review. *Sustainability*, 15(18), 13566. <https://doi.org/10.3390/su151813566>
- Nchu, R. M., Tengeh, R. K., & Cronje, J. (2023). A call for more entrepreneurship education in non-business programs at South African TVET colleges. *EUREKA: Social and Humanities*, 3, 67–78. <https://doi.org/10.21303/2504-5571.2023.003062>
- Ncube, T. R., & Matlala, M. E. (2025). Entrepreneurship competencies and entrepreneurial intention among south african students: the role of entrepreneurship education. In journal of economic and social development (jesd)-resilient society (vol. 12, issue 1).
- Ncube, T.R. (2025). *Assessing the Impact and Challenges of Entrepreneurship Education in a University of Technology in South Africa*. <https://doi.org/10.51415/ajims.v7i2.1564>
- Ndaba, X., & Dube, B. (2022). Exploring Blended Teaching in the Learning of Life Sciences in Rural Context. *Alternation Interdisciplinary Journal for the Study of the Arts and Humanities in Southern Africa*, 29(2). <https://doi.org/10.29086/2519-5476/2022/v29n1a8>
- Ndlovu, C & Masuku, M. (2021). Small-scale Farming and Access to Market: Challenges and Opportunities in South Africa. *Journal La Sociale*. 2. 50-63. 10.37899/journal-la-sociale.v2i5.491.
- Neves, C., Oliveira, T., Cruz-Jesus, F., & Venkatesh, V. (2025). Extending the unified theory of acceptance and use of technology for sustainable technologies context. *International Journal of Information Management*, 80, Article 102838. <https://doi.org/10.1016/j.ijinfomgt.2024.102838>
- Nevondwe, N. & Ngwenya, C. (2025). Social Entrepreneurship Education effectiveness in Technical Vocational Education and Training Colleges: The case of South Western Townships, South Africa. *Journal of Education and Learning Technology*. 1082-1097. 10.38159/jelt.20256113.
- Ngcobo, S, & Khumalo, N. (2022). Challenges of adopting entrepreneurship education as a

- strategic approach to unemployed-youth in South Africa. *Technium Social Sciences Journal*. 29. 98–109. 10.47577/tssj.v29i1.5430.
- Ngcwangu, S. (2024). An elusive search for skills: assessing debates, practices, and experiences in South Africa. *International Journal of Training Research*, 23(2), 106–121. <https://doi.org/10.1080/14480220.2024.2369504>
- Ngoc Ha, N. T., Van Dyke, N., & Spittle, M. (2025). Micro-credentials in higher education: perceived benefits for graduate employability and interest levels in micro-credentials for training employability skills. *Studies in Higher Education*, 1–13. <https://doi.org/10.1080/03075079.2025.2516709>
- Ngqwala, N. S., & Ballard, H. H. (2020). Leadership imperatives for local government service delivery: Case of a selected local municipality in the Eastern Cape, South Africa. *Administratio Publica*, 28(2), 118–131. <https://hdl.handle.net/10520/ejc-adminpub-v28-n2-a8>
- Ngumbela, X. G. (2021). *Unique Challenges of the Poverty Dilemma in the Eastern Cape Province of South Africa*.
- Nickerson, C. (2024). Functionalist Perspective on Education. Simply Psychology. <https://www.simplypsychology.org/functionalist-perspective-education.html> (simplypsychology.org)
- Nikolopoulou, K. (2022). *What Is Convenience Sampling? | Definition & Examples*. Scribbr. Retrieved from <https://www.scribbr.com/methodology/convenience-sampling/>
- Nikolov, P., & Jimi, N. (2020). *The importance of cognitive domains and the returns to schooling in South Africa: Evidence from two labour surveys*. arXiv. <https://arxiv.org/abs/2006.00739>. This study finds each additional year of schooling increases earnings by approximately 18–20 %.
- Njati, Ibuathu & Lideke, Oliver. (2022). Determinants of students learning competencies in agriculture through hands-on experiences. *African Journal of Science, Technology and Social Sciences*. 1. 132-142. 10.58506/ajstss.v1i2.9.
- Njengele, T., Engel-Hills, P., & Winberg, C. (2024). Technical and vocational education and training (TVET) colleges and industry: Strengthening partnership-building practices. *Journal of Vocational, Adult and Continuing Education and Training*, 7(2), 23. <https://doi.org/10.14426/jovacet.v7i2.418>
- Nkosi, M., Agholor, A. I., & Olorunfemi, O. D. (2024). Agro-Investments among Small Farm Business Entrepreneurs in the Era of the Fourth Industrial Revolution: A Case in the

- Mpumalanga Province, South Africa. *Administrative Sciences*, 14(5), 85. <https://doi.org/10.3390/admsci14050085>
- Nkwinika, E. & Akinrinde, O. (2023). An investigation into the financial challenges affecting the success of entrepreneurs in South Africa. *Technology audit and production reserves*. 6. 36–44. 10.15587/2706-5448.2023.292555.
- Noble, H., & Smith, J. (2025). Ensuring validity and reliability in qualitative research. *Evidence Based Nursing* 28, 206–208. <https://doi.org/10.1136/ebnurs-2024-104232>
- Nogcantsi, B., Mbatha, L.L. (2025). Whispers of potential: Barriers to qualification completion of National Accredited Technical Education Diploma programmes in a selected TVET College. *Transformation in Higher Education* 10. <https://doi.org/10.4102/the.v10i0.600>
- Nontu, Y., & Mdoda, L., & Dumisa, B., Mujuru, N., & Ndwandwe, N., & Gidi, L., & Xaba, M. (2024). Empowering Rural Food Security in the Eastern Cape Province: Exploring the Role and Determinants of Family Food Gardens. *Sustainability*. 16. 6780. 10.3390/su16166780.
- Nor, A. I. (2025). The effect of training on public service delivery effectiveness in public sector organizations: the mediating role of civil servants' performance. *Cogent Social Sciences*, 11(1). <https://doi.org/10.1080/23311886.2025.2466788>
- Norodien-Fataar, N. (2024). Expanding student access to higher education: Examining the strategic processes for enhancing access to higher education from technical and vocational education and training colleges to universities of technology. *Journal of Vocational, Adult and Continuing Education and Training*, 7(1), 112–129. <https://doi.org/10.14426/jovacet.v7i1.393>
- Nthako Dorothy, & Shutu Khumalo (2025). Exploring the dynamics and complexities of a misaligned TVET-Industry Partnership: A case of South Africa. *Journal of Education, Society & Multiculturalism*. 6. 102–122. 10.2478/jesm-2025-0007.
- Nxumalo, G.S., Chauke, H., (2025). Challenges and opportunities in smallholder agriculture digitization in South Africa. *Frontiers in Sustainable Food Systems* 9. <https://doi.org/10.3389/fsufs.2025.1583224>
- Nyabvudzi, R. M., & Nkwana, H. M. (2024). Public-Private Partnership Strategies Supporting Smallholder Farmers to Enhance Food Security in South Africa. *Administratio Publica*, 32(3), 88–108. <https://doi.org/10.61967/adminpub.2024.32.3.6>
- O'Neil, S., Davel, N.J., Holtzhausen, N. (2023). A short report of the value of learnerships from an organisational stakeholder point of view. *SA Journal of Human Resource Management*

21. <https://doi.org/10.4102/sajhrm.v21i0.2006>
- Odei, S.A. (2024). The relationship between perceived institutional conditions and firm-level innovations in emerging markets: Moderating effects of firm ownership. *PLOS ONE* 19, e0291290. <https://doi.org/10.1371/journal.pone.0291290>
- Odhiambo, N. (2020). Education and economic growth in South Africa: an empirical investigation. *International Journal of Social Economics*, 48(1), 1–16. <https://doi.org/10.1108/ijse/ijse, 04, 2020, 0259>
- Odjo, C. Z. (2024). Regional Integration of Technical and Vocational Education and Training in ECOWAS Region. *International Journal of Research and Review*. 11. 403-418. 10.52403/ijrr.20240648.
- OECD. (2021). *Jobs for rural youth: The role of local food economies* (Development Centre Studies). OECD Publishing. <https://doi.org/10.1787/692c0ca1-en>
- OECD. (2023). Building future-ready vocational education and training systems (OECD Reviews of Vocational Education and Training). OECD Publishing. <https://doi.org/10.1787/28551a79-en> (OECD)
- OECD. (2025). *How can innovative technologies transform vocational education and training* (Policy Paper)? OECD Publishing. https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/05/how-can-innovative-technologies-transform-vocational-education-and-training_5b10f8ac/fb40f416-en.pdf
- Ofosu-Appiah, S., Boahen, P.A.N., Agbenyegah, A.T. (2025). Socio-ecological barriers to youth entrepreneurship in sub-Saharan Africa: a systematic review of empirical evidence. *Journal of Innovation and Entrepreneurship* 14. <https://doi.org/10.1186/s13731-025-00484-x>
- Ogondiek, M. (2024). Formative Assessment Practices and its Effect on Employability Skills to Vocational Students in Tanzania. *JOURNAL OF ISSUES AND PRACTICE IN EDUCATION*. 16. 10.61538/jipe.v16i.1438.
- Okai-Ugbaje, S., Ardzejewska, K., & Imran, A. (2022). A mobile learning framework for higher education in resource constrained environments. *Education and information technologies*, 27(8), 11947–11969. <https://doi.org/10.1007/s10639-022-11094-5>
- Olabanji, M.F., Chitakira, M. (2025). The Adoption and Scaling of Climate-Smart Agriculture Innovation by Smallholder Farmers in South Africa: A Review of Institutional Mechanisms, Policy Frameworks and Market Dynamics. *World* 6, 51.

<https://doi.org/10.3390/world6020051>

- Olumuyiwa Omotosho, A., & Thulisile-Ndashe, P. F. (2024). The Influence of Agricultural Learnership Programme on Graduates' Job Prospects. *International Journal of Management, Knowledge and Learning*, 13. https://doi.org/10.53615/2232_5697.13.55_70
- Oluwaseyi, O, Micheal, O, Asante, G, & Williams, B. (2025). The Impact of Globalization on Labor Markets: Opportunities and Challenges.
- Oranga, J. (2025). MIXED METHODS RESEARCH: MERITS, APPLICATIONS AND CHALLENGES. *International Journal of Social Science*. 5. 233–238. [10.53625/ijss.v5i2.11034](https://doi.org/10.53625/ijss.v5i2.11034).
- Ordonez & Ponce, E. (2021). The Role of Institutional Context for Sustainability Cross-Sector Partnerships. An Exploratory Analysis of European Cities. *Sustainability*, 13, 9497. <https://doi.org/10.3390/su1317947>
- Organisation for Economic Co-operation and Development. (2020). *Strengthening the Governance of Skills Systems: Lessons from Six OECD Countries* (OECD Skills Studies). OECD Publishing. <https://doi.org/10.1787/3a4bb6ea-en>
- Organisation for Economic Co-operation and Development. (2025). *How can innovative technologies transform vocational education and training?* OECD Publishing. https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/05/how-can-innovative-technologies-transform-vocational-education-and-training_5b10f8ac/fb40f416-en.pdf
- Organisation for Economic Co-operation and Development. (2025). *Vocational education and training in Switzerland*. In *Vocational education and training systems in nine countries* (OECD Reviews of Vocational Education and Training). OECD Publishing. <https://doi.org/10.1787/1a86eb6c-en>
- Orji, C. (2025). Mastery Through Practice: Exploring the Apprenticeship-Based Learning for Skills Acquisition, Sustained Engagement, and Lifelong Learning. *International Journal of Home Economics, Hospitality and Allied Research*. 4. 483-502. [10.57012/ijhhr.v4n1.024](https://doi.org/10.57012/ijhhr.v4n1.024).
- Otache, I. (2025). The links between entrepreneurial education, self-efficacy, attitude and behaviour: A serial mediation model. *The International Journal of Management Education*, 23(2), 101146. <https://doi.org/10.1016/j.ijme.2025.101146>
- Otu, W. (2025). Family engagement in technical/vocational education and training and students'

- enrolment in Akuapem North municipality in Ghana. 10.63236/ijhss.17.1.4.
- Pandey, M., Rana, P., Tripathi, S., Kumar, S., Vishwakarma, F., Pandey, A., & Shastri, S. (2025). Public-Private Partnerships in Agricultural Extension: Opportunities and Challenges. *Journal of Experimental Agriculture International*. 47. 597–612. 10.9734/jeai/2025/v47i63520.
- Panyakom, R., Pounsuk, P., Intorrathed, S., & Hongmaneerat, K. (2020). A new way of agricultural farm work in the educational facilitation of dual education between vocational education and upper secondary school curricular programs. *Journal for the Education of Gifted Young Scientists*, 8(2), 935–946. <https://doi.org/10.17478/jegys.711312>
- Papier, J., Mawoyo, M. (2024). What does ‘quality teaching and learning’ mean in TVET contexts?. *Journal of Vocational, Adult and Continuing Education and Training* 7, 22. <https://doi.org/10.14426/jovacet.v7i2.419>
- Peñate, A.H., Padrón-Robaina, V., Nieves, J. (2024). The role of technological resources in the reputation of vocational education schools. *Education and Information Technologies* 29, 2931–2950. <https://doi.org/10.1007/s10639-023-11919-x>
- Permani, R., Basir, M. K. H., Winarno, K., Dewan, B., Maryono, M., Dang, T. H., Sarkar, A., Haque, M. M., Muflikh, Y. N., & Krishnasamy, S. (2025). Integrating agricultural research into undergraduate work-integrated learning (WIL) courses. *Applied Economics Teaching Resources*, 7(2). https://ageconsearch.umn.edu/record/356647/files/5_Permani_Full_PDF.pdf
- Peter D, Peter M, Peter P (2025). "Mapping the landscape of TVET education: a global bibliometric analysis". *Asian Education and Development Studies*, Vol. 14 No. 5 pp. 1179–1204, doi: <https://doi.org/10.1108/AEDS-07-2024-0141>
- Petropoulos, D., Deirmentzoglou, G. A., Apostolopoulos, N., Paris, B., Michas, D., Balafoutis, A. T., Athanasopoulou, E., Nibbi, L., Li, H., Carvalho, L., Helena, M., & Fernando, J. (2024). Digital and Entrepreneurial Competencies for the Bioeconomy: Perceptions and Training Needs of Agricultural Professionals in Greece, Italy, Portugal, and Sweden. *Agriculture*, 15(10), 1106. <https://doi.org/10.3390/agriculture15101106>
- Philip B, Mathew GA, Sebastian RT (2025). "The influence of work-integrated learning programs on the sustainable transition of graduates to the labor market". *Higher Education, Skills and Work-based Learning*, Vol. 15 No. 6 pp. 1244–1262, doi: <https://doi.org/10.1108/HESWBL-03-2025-0123>
- Pintor, S. & Budiayanti, H. (2021). Emotional intelligence and service quality of facilitators’

- Indonesia human resources development agency (HRDA). *Sosiohumaniora*, 23(2), 205. <https://doi.org/10.24198/sosiohumaniora.v23i2.31595>
- Pliakoura, A. & Beligiannis, G. & Kontogeorgos, Achilleas. (2020). Education in agricultural entrepreneurship: training needs and learning practices. *Education and Training*. 62. 10.1108/ET-04-2020-0095.
- Pongweni, T. (2025). Auditor-General flags severe financial oversight issues at Banking SETA. *Daily Maverick*. Retrieved from <https://www.allafrica.com/stories/202511130177.html>
- Prayudo, L. & Prihatini, G., & Hudiyah, D. (2025). The Role of Human Resource Management in The Succession Planning Process. *Research Horizon*. 5. 751–762. 10.54518/rh.5.3.2025.630.
- Pretti, T. J., Parrott, P., Hoskyn, K., Fannon, A.M., Church, D., & Arsenault, C. (2020). The role of work-integrated learning in the development of entrepreneurs. *International Journal of Work-Integrated Learning*, 21(4), 451–466.
- Prince, S., Chapman, S., & Cassey, P. (2021). The definition of entrepreneurship: Is it less complex than we think? *International Journal of Entrepreneurial Behavior & Research*, 27(9), 26–47. <https://doi.org/10.1108/IJEBr-11-2019-0634>
- Probyn, M.J. (2024). Multilingual literacies for learning: Shifting ideologies, developing praxis. *Reading & Writing* 15. <https://doi.org/10.4102/rw.v15i1.505>
- Prummer, K. (2023). Vocational education and training in South Africa: leaders' perceptions of a mentoring framework in a professional development programme. *International Journal of Mentoring and Coaching in Education*, 13(2), 195–213. <https://doi.org/10.1108/ijmce-03-2023-0032>
- Pryimak, V. (2023). Current trends in the training of vocational education specialists in road transport. *Scientific Bulletin of Mukachevo State University Series “Pedagogy and Psychology”*, 9(1). <https://doi.org/10.52534/msu>, pp1.2023.59
- Public Service Commission. (2021). Effectiveness of Continuous Employee Development in Enhancing Service Delivery in the Public Service. [https://www.psc.gov.za/documents/reports/2021/Effectiveness of Continuous Employee Development Cap.pdf](https://www.psc.gov.za/documents/reports/2021/Effectiveness%20of%20Continuous%20Employee%20Development%20Cap.pdf)
- Pulley, J., Claflin, K., Thompson, A. (2025). Review of Virtual Reality Applications in Agriculture Education and Recommendations for Future Research. *Journal of Agricultural Education* 66, 15. <https://doi.org/10.5032/jae.v66i3.3195>
- Puriwat, W., & Tripopsakul, S. (2021). Explaining social media adoption for a business purpose:

- an application of the UTAUT model. *Sustainability*, 13(4), 2082.
- Qwabe, Q. & Khapayi, M. (2025). Investigating the Influence of Agricultural Extension Service Providers (AESPS) on Building Inclusive Food Systems Through Underutilised Indigenous Foods Education: A Case Study. *South African Journal of Agricultural Extension (SAJAE)*. 53. 1–15. 10.17159/2413-3221/2025/v53n1a16943
- Rabie, B., Cornelissen, M.M. (2023). Training Impact Assessment of the Elsenburg Agricultural Training Institute Learnership Programme. *South African Journal of Agricultural Extension (SAJAE)* 51, 89–99. <https://doi.org/10.17159/2413-3221/2023/v51n2a13914>
- Rahimi, S. & Khatooni, M. (2024). Saturation in qualitative research: An evolutionary concept analysis. *International Journal of Nursing Studies Advances*. 6. 100174. 10.1016/j.ijnsa.2024.100174.
- Rahmawati, S., Prestridge, S., Abdullah, A. G., & Widiaty, I. (2025). Unpacking the digital competence challenge in vocational education: A case from Indonesia. *Social Sciences and Humanities Open*, 12. <https://doi.org/10.1016/j.ssaho.2025.101803>
- Raj, A., & Jain, V. (2025). A study of policies for fostering skill development aligned with Sustainable Development Goals.
- Rajamanickam, S, & Che Rus, R, & Abdul Raji, M. N., & Mina, H, & Vebrianto, R. (2025). Global Trends in Vocational Training Education: A Bibliometric Analysis. *International Journal of Research and Innovation in Social Science*. VIII. 4548–4564. 10.47772/IJRISS.2024.8120382.
- Rajuroy, A. (2025). Integrating Emerging Technologies and Digital Competencies into Vocational Training: Preparing Learners for the Evolving Industrial Landscape.
- Rasoolimanesh, S. Mostafa & Iranmanesh, Mohammad & Amin, Muslim & Hussain, Kashif & Jaafar, Mastura & Ataei Shad, Hamid. (2020). Are Functional, Emotional, and Social Values Interrelated? A Study of Traditional Guesthouses in Iran. *International Journal of Contemporary Hospitality Management*. 10.1108/IJCHM-03-2020-0193.
- Ratten, V. (2023). Entrepreneurship: Definitions, opportunities, challenges, and future directions. *Global Business and Organizational Excellence*, 42(5), 79–90. <https://doi.org/10.1002/joe.22217>
- Ray, S, & Zarestky, J. (2021). Gender in vocational education and training: an integrative review. *European Journal of Training and Development*. ahead-of-print. 10.1108/EJTD-12-2019-0196.
- Raza, F. (2023). AI in Education: Personalized Learning and Adaptive Assessment.

10.13140/RG.2.2.24796.77446.

- Raza, G, Kratzer, J, Zaheer, S., & Kazmi, Syed Z. A. (2024). Agri-entrepreneurship in developing countries: a systematic review of smallholders' constraints. *Journal of Agribusiness in Developing and Emerging Economies*. 10.1108/JADEE-06-2024-0185.
- Resnick, D., Diao, X., & Tadesse, G. (Eds.). (2020). *Sustaining Africa's agrifood system transformation: The role of public policies* — ReSAKSS Annual Trends and Outlook Report. AKADEMIYA2063 / ReSAKSS. Retrieved from https://www.resakss.org/sites/default/files/2020_ator_individual_chapters/Ch9%20ReSAKSS_AW_ATOM_2020.pdf
- Reznikova, L., Labanino, R., & McKee Mathews, D. (2024). *Pooling our strengths: The power of stakeholder engagement in education and skills policy* (OECD Social, Employment and Migration Working Paper No. 316). OECD Publishing. <https://doi.org/10.1787/b73697cb-en>
- Riyanda, A. & Parma Dewi, I.P. D. & Jalinus, N. & Ahyanuardi & Sagala, M. & Rinaldi, D. & Prasetya, R. & Yanti, F. (2025). Digital Skills and Technology Integration Challenges in Vocational High School Teacher Learning. *Data and Metadata*. 4. 553. 10.56294/dm2025553.
- Rizkalla, N., & Setiadi, D. D. (2020). *Appraising the influence of the theory of consumption values on environmentally-friendly product purchase intention in Indonesia*. *Management & Marketing*, XVIII(1), 8–24. Retrieved from https://www.mnmk.ro/documents/2020_1/1-7-1-20.pdf
- Rogan, M., Friderichs, T., & Needham, S. (2020). *A baseline study on the destination of TVET college graduates to strengthen employment promotion in South Africa* (Report commissioned by Department of Higher Education and Training / Government Technical Advisory Centre). <https://www.gtac.gov.za/wp-content/uploads/2022/02/A-Baseline-Study-on-the-Destination-of-TVET-College-Graduates-to-Strengthen-Employment-Promotion-in-South-Africa.pdf>
- Rogito, J., Makhanu, E., Mombinya, B., & Nyamota, G. (2020). Relationship between access to financial services and youth involvement in agricultural value chains in Kakamega County, Kenya. *Agricultural and Resource Economics: International Scientific E-Journal*. 6. 24–36. 10.51599/are. 2020.06.02.02.
- Romanova, O. (2022). Embedding employability skills in vocational education and training: What works best for students' self-evaluation and aspirations? *Journal of Teaching and*

- Learning for Graduate Employability. 13. 20–36. 10.21153/jtlge2022vol13no1art1488.
- Roselidyawaty, N., Mohd Rokeman, N., Nasir, M., & Yaacob, M. (2025). EXPLORING BARRIERS AND IMPACTS OF THE DIGITAL DIVIDE IN VOCATIONAL EDUCATION: A SYSTEMATIC LITERATURE REVIEW.
- Rotar, O. (2022). Online student support: a framework for embedding support interventions into the online learning cycle. *Research and Practice in Technology Enhanced Learning* 17. <https://doi.org/10.1186/s41039-021-00178-4>
- Rugpath, N., Mamabolo, A., 2022. Entrepreneurial learning outcomes in the transition from hybrid to full-time entrepreneurship. *South African Journal of Business Management* 53. <https://doi.org/10.4102/sajbm.v53i1.3359>
- Ruijuan, L., Srikhao, S., & Jantharajit, N. (2024). From classroom to career: Enhancing vocational education through collaborative and active learning. *Journal of Education and Educational Development*, 11(2), 332–344. <https://files.eric.ed.gov/fulltext/EJ1457022.pdf>
- Ruppar, T. (2025). Limitations Are Important. *Western Journal of Nursing Research*. <https://doi.org/10.1177/01939459241313101>
- Rusenga, C. & Ndhlovu, E. (2023). Land Reform and Financial Inclusion Challenges in South Africa. 10.1007/978-3-031-23863-5_7.
- Ryklief, M. & Tengeh, R. (2022). The importance of training and development for government officials in South Africa. *International Journal of Research in Business and Social Science* (2147–4478). 11. 642–656. 10.20525/ijrbs.v11i6.1990.
- Saah, P., Musvoto, W.S. (2020). A management approach for enhancing the sustainability of small and medium size enterprises in the North-West Province of South Africa. *Journal of Contemporary Management* 17, 179–197. <https://doi.org/10.35683/jcm19119.70>
- Sahoo, S., Singha, C., Govind, A., & Moghimi, A. (2025). Review of climate-resilient agriculture for ensuring food security: Sustainability opportunities and challenges of India. In *Environmental and Sustainability Indicators* (Vol. 25). Elsevier B.V. <https://doi.org/10.1016/j.indic.2024.100544>
- Salam, A., Siswanto, I., & Sholikah, M. (2021). The effect of entrepreneurship education on students' entrepreneurship intention in vocational school. *Indonesian Research Journal in Education [Irje]*, 5(1), 85, 102. <https://doi.org/10.22437/irje.v5i1.11185>
- Samlawi, A. & Norviana, S. (2025). CHALLENGES IN PREPARING AN ADAPTIVE VOCATIONAL CURRICULUM IN THE SOCIETY 5.0 ERA: A LITERATURE

- STUDY. *Journal of Vocational Applied Research and Studies*. 2. 21-27. 10.21831/jvars.v2i1.1454.
- Santoso, R., Priyanto, S.H., Junaedi, I.W.R., Santoso, D.S.S., Sunaryanto, L.T. (2023). Project-based entrepreneurial learning (PBEL): a blended model for startup creations at higher education institutions. *Journal of Innovation and Entrepreneurship* 12. <https://doi.org/10.1186/s13731-023-00276-1>
- Sari, N., Banyuriatiga, B., Al-Hafiz, A., & Zulkarnain, R. (2025). Enhancing Vocational Education for Agribusiness Competence in the Era of Industry 4.0: A Study on Improving Curriculum Relevance and Graduate Readiness in Agricultural Product Processing. *Jurnal Pendidikan, Sains, Geologi, dan Geofisika (GeoScienceEd Journal)*. 6. 1480–1490. 10.29303/goescienceed.v6i3.1151.
- Sarta, A., Durand, R., & Vergne, J.-P. (2021). Organisational Adaptation. *Journal of Management*. 47. 10.1177/0149206320929088.
- SASSETA. (2025). Evaluation study on Business Administration learnership programme funded by SASSETA. <https://www.sasseta.org.za/wp-content/uploads/2025/03/Evaluation-study-on-Business-Administration-Learnership-Programme-funded-by-SASSETA.pdf>
- Saungweme, T. & Odhiambo, N. (2020). Causality between public debt, public debt service and economic growth in an emerging economy. *Studia Universitatis Babe, Bolyai Oeconomica*, 65(1), 1, 19. <https://doi.org/10.2478/subboec/subboec, 2020, 0001s>
- Scartozzi, G., Delladio, S., Rosati, F., Nikiforou, A.I., Caputo, A. (2025). The social and environmental impact of entrepreneurship: a review and future research agenda. *Review of Managerial Science* 19, 1041–1072... <https://doi.org/10.1007/s11846-024-00783->
- Schneider, H., Amde, W., Carolissen, C., Van Wyk, B., Lehmann, U. (2024). Responsive public health doctoral education: experiences and reflections from a School of Public Health in South Africa. *BMJ Global Health* 9, e015095. <https://doi.org/10.1136/bmjgh-2024-015095>
- Scott, I., & Gong, T. (2021). Coordinating government silos: challenges and opportunities. *Global Public Policy and Governance*, 1(1), 20–38. <https://doi.org/10.1007/s43508-021-00004-z>
- Sebola, M. P., Moloto, A. N., & Mamabolo, M. A. (2024). *Leadership and ethics in the South African public sector: Ethical and leadership challenges*. *Journal of Public Administration, Finance and Law*, Issue 31. <https://doi.org/10.47743/jopafl-2024-31-29>
- Seeko, L. (2023). Democracy and inclusive education policy in post-1994 South African schools: goal, tension, and struggle. *Educational Research for Social Change*, 12(2), 114–129.

<https://doi.org/10.17159/2221,4070/2023/v12i2a8>

- Selane, C & Odeku, K. (2024). An Analysis of How TVET is Playing a Significant Role in Fostering Students' Skills and Competencies in South Africa. *Journal of Educational and Social Research*. 14. 293. 10.36941/jesr-2024-0074.
- Selase, G, Amewu, J, Krampa, E, Buami, E, & Gbadegbe, R. (2023). Technology Integration in Technical and Vocational Education and Training (TVET): The Role of the Art Teacher. *Journal of Technical Education and Training*. 73–88. 10.30880/jtet. 2023.15.04.007.
- Semali, L. (2024). Leveraging multistakeholder partnerships in technical, vocational education, and training. *Vocation, Technology & Education* 1. <https://doi.org/10.54844/vte.2024.0558>
- Sephokgole, R, Makgato, M, & Khoza, S. (2023). Innovative Strategies for Integrating Technology into Agricultural Programmes at Technical and Vocational Colleges. *International Journal of Learning, Teaching and Educational Research*. 22. 441–464. 10.26803/ijlter. 22.8.23.
- Sephokgole, R. (2025). An Assessment of the Challenges Associated with Technology Integration in Agricultural Programs in TVET Colleges, South Africa. *Journal of Education and Learning Technology*. 6. 729-745. 10.38159/jelt.2025693.
- Sephokgole, R., Makgato, M., & Ramaligela, S. (2021). The Impact of Contextual Factors on Learning of Agricultural Programmes in Technical and Vocational Education Training Colleges, South Africa. *International Journal of Learning, Teaching and Educational Research*. 20. 282–299. 10.26803/ijlter. 20.5.16.
- Sespeñe, M.N., Oyangoren, H., Narnola, R.M., & Picardal, M. (2021). Macro and Micro Context Factors in English Language Learning in Modular Distance Learning. *Recoletos Multidisciplinary Research Journal*. 9. 10.32871/rmrj2109.02.02.
- Sethi, A, Jangir, K, Toshniwal, R, & Vaidya, R. (2024). Role of Vocational Training Effectiveness and Employment Outcomes in Sustainable Quality Education. 10.2991/978-94-6463-544-7_33.
- Seti, T.M., Ngqulana, A., Sindesi, O.A., 2025. Industry perceptions of employability skills for agricultural graduates in the fourth industrial revolution. *SA Journal of Industrial Psychology* 51. <https://doi.org/10.4102/sajip.v51i0.2214>
- Setyawan, H., Sukardi, & Risfendra, & Yanto, D., & Tee, T. (2025). The Impact of Robotic Technology in Vocational Education towards the Development of Industry 5.0: A Systematic Literature Review. *International Journal of Online and Biomedical*

- Engineering (iJOE). 21. 36–55. 10.3991/ijoe.v21i06.53681.
- Shao, L., Miao, Y., Ren, S., Cai, S., Fan, F. (2024). Designing a framework for entrepreneurship education in Chinese higher education: a theoretical exploration and empirical case study. *Humanities and Social Sciences Communications* 11. <https://doi.org/10.1057/s41599-024-03024-2>
- Sharma, C., & Kushwah, S. (2025). Mapping the Theory of Consumption Values: A Systematic Review Using the TCCM Approach. *Journal of Consumer Behaviour*, 24(2), 562–610. <https://doi.org/10.1002/cb.2434>
- Shravani, K., Padaria, R. N., Singh, R., Sarkar, S., Praveen, K. V., Varghese, C., Rakshit, S., Aishwarya, S., Yadav, P., Saini, S., Mukherjee, S., Ghosh, B., Sravani, S., Venkata, N., & Pundir, S. (2025). Effectiveness of virtual learning system in agricultural education in India. *Frontiers in Education*, 10, 1588899. <https://doi.org/10.3389/feduc.2025.1588899>
- Siebel, J., Zahilas, L., Tissot, P., Singer, S., Rodriguez, I., Morselli, D, & Seikkula-Leino, J. (2023). Entrepreneurship competence in vocational education and training. 10.2801/445669.
- Silva, L. C., Macedo, I. M., & Thompson, M. (2024). Revisiting the debate on institutions, the state and institutional change: The relevance of institutional theory to public administration teaching. *Teaching Public Administration*, 42(1), 73–94. <https://doi.org/10.1177/01447394231159985>
- Simelane-Mnisi, S. (2023). Effectiveness of LMS Digital Tools Used by the Academics to Foster Students' Engagement. *Education Sciences* 13, 980. <https://doi.org/10.3390/educsci13100980>
- Simweleba, N.H., Serpell, R. (2020). Parental involvement and learners' performance in rural basic schools of Zambia. *South African Journal of Childhood Education* 10. <https://doi.org/10.4102/sajce.v10i1.608>
- Singh R, Kumar V, Singh S, Dwivedi A, Kumar S (2024). "Measuring the impact of digital entrepreneurship training on entrepreneurial intention: the mediating role of entrepreneurial competencies". *Journal of Work-Applied Management*, Vol. 16 No. 1 pp. 142–163, doi: <https://doi.org/10.1108/JWAM-11-2022-0076>
- Sirůček, P. & Džbáňková, Z. (2024). *R. Cantillon's concept of the entrepreneur*. In Proceedings of the 18th International Days of Statistics and Economics (pp. 125–134). Prague University of Economics and Business. https://msed.vse.cz/msed_2024/article/msed-2024-763-paper.pdf

- Sithole, M., Agholor, I., Morepje, M. T., Msweli, N., Ndlovu, S., & Mgwenya, L. (2024). Smallholder Transition to Agripreneurship: The Role of Agricultural Extension Education. *Il Ponte*, 80, 78–102. 10.21506/j.ponte.2024.10.6.
- Sithole, N. A. (2025). *Monitoring and evaluation systems: An underrated resource in strengthening effectiveness of governance on a global scale*. Inclusive Society Institute. <https://www.inclusivesociety.org.za/post/monitoring-and-evaluation-systems-an-underrated-resource-in-strengthening-effectiveness-of-governan>
- Smalley, S. (2024). Teacher Needs and Professional Development in Agricultural Education. 10.4018/979-8-3693-2766-1.ch010.
- Sonandi, A., Ladzani, M. W., & Nealer, E. J. (2021). *Lack of business planning: A barrier to successful implementation of total quality management in South African agricultural small, micro- and medium-sized enterprises*. *Journal for Transdisciplinary Research in Southern Africa*, 17(1), a1013. <https://doi.org/10.4102/td.v17i1.1013>
- Song, S., & Lai, Y. C. (2025). Blended learning in vocational education: benefits, challenges, and student engagement. *Cogent Education*, 12(1). <https://doi.org/10.1080/2331186X.2025.2548348>
- Sony, M., & Aithal, P. S. (2020). A Resource-Based View and Institutional Theory-Based Analysis of Industry 4.0 Implementation in the Indian Engineering Industry. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 5(2): 154, 166. DOI: <http://doi.org/10.5281/zenodo.4037809>
- South African Government, Department of Higher Education and Training. (2023). *National Plan for Post-School Education and Training 2020-2030* (Web version). https://www.dhet.gov.za/SiteAssets/NPPSET/DHET%20NPPSET%20_%20Web%20version%2018092023.pdf
- South African Institute of International Affairs. (2023). South Africa: Realising youth futures by delivering on promised goals. SAIIA. <https://saiia.org.za/research/south-africa-realising-youth-futures-by-delivering-on-promised-goals/>
- South African Qualifications Authority. (2023). *Guidelines for integrated assessment*. https://www.saqa.org.za/wp-content/uploads/2023/02/intassessment_0.pdf
- Southern African Development Community. (2022). *Situational Analysis of Technical Vocational Education and Training (TVET) in SADC Member States*. Gaborone: SADC Secretariat. Retrieved from https://www.sadc.int/sites/default/files/2022-07/Situational_Analysis_of_TVET_in_SADC_Member_States.pdf

- Statistics South Africa. (2025). *Quarterly Labour Force Survey (QLFS) - Q2: 2025 Media Release*.
<https://www.statssa.gov.za/publications/P0211/Media%20Release%20QLFS%20Q2%202025.pdf>
- Storonyanska, I., Benovska, L., Patytska, K., Ivashko, O., & Chulipa, I. (2024). Redesigning Sustainable Vocational Education Systems to Respond to Global Economic Trends and Labor Market Demands: Evidence from EU Countries on SDGs. *Sustainability*, 17(21), 9530. <https://doi.org/10.3390/su17219530>
- Strohwald, A. (2024). The right to basic education as a primary driver of transformation in South Africa: considering cooperation. *Obiter*, 45(3), 595-609.
http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S1682-58532024000300004&lng=en&tlng=en.
- Strydom, E., & Masitenyane, L. (2025). STAKEHOLDER PERCEPTIONS AND STRATEGIC ALIGNMENT IN THE WHOLESALE AND RETAIL SECTOR: A MIXED-METHODS EVALUATION OF W&R SETA LEARNERSHIPS IN SOUTH AFRICA (2019-2023).
- Suanpong, K., Yeing-aramkul, Y., Yoochayantee, K., & Tripopsakul, S. (2025). Cognitive and motivational drivers of entrepreneurial intention in an emerging economy: Implications for open innovation dynamics. *Journal of Open Innovation: Technology, Market, and Complexity*, 11(2), 100568. <https://doi.org/10.1016/j.joitmc.2025.100568>
- Sultanova, G., Shilibekova, A., Rakhymbayeva, Z., Rakhimbekova, A., & Shora, N. (2024). Exploring the influence of non-cognitive skills on academic achievement in STEM education: The case of Kazakhstan. *Frontiers in Education*, 9, 1339625. <https://doi.org/10.3389/feduc.2024.1339625>
- Tabrizi, H. A., Narmina, I., & Mullern, T. (2024). The Role of Emotional Content on Consumer Engagement: Evaluating the role of emotional content on consumer engagement in Social Media Advertising. Master's Degree Project in Business Administration.
- Taherdoost, H., Madanchian, M. (2023). Multi-Criteria Decision Making (MCDM) Methods and Concepts. *Encyclopedia* 3, 77–87. <https://doi.org/10.3390/encyclopedia3010006>
- Tajik, O., Golzar, J., & Noor, S. (2024). | P a g e Purposive Sampling. In *IJELS* (Issue 2).
- Tan, L. Y., Hu, S., Yeo, D. J., & Cheong, K. H. (2025). Artificial intelligence-enabled adaptive learning platforms: A review. In *Computers and Education: Artificial Intelligence* (Vol. 9). Elsevier B.V. <https://doi.org/10.1016/j.caeai.2025.100429>

- Tang, Q., Kamarudin, S., Abdul Rahman, S. N., & Zhang, X. (2024). Bridging gaps in online learning: A systematic literature review on the digital divide. *Journal of Education and Learning*, 14(1), 161–176. <https://doi.org/10.5539/jel.v14n1p161> (files.eric.ed.gov)
- Tanlaka, E.F., Aryal, S. (2025). Interpretivist Constructivism: A Valuable Approach for Qualitative Nursing Research. *Open Journal of Therapy and Rehabilitation* 13, 8–19. <https://doi.org/10.4236/ojtr.2025.131002>
- Taofoek, A. (2025). Developing Dynamic Vocational Training Frameworks Through Sustained Industry Collaboration: A Strategic Approach to Workforce Readiness.
- Tariq, M. U. (2025). Ensuring Trustworthiness and Rigor in Qualitative Research. 10.4018/979-8-3693-7200-5.ch012.
- Tekwa, N. (2024). THE SETAs AND S-SYSTEM SKILLS DEVELOPMENT IN SOUTH AFRICA AND BRAZIL: A TRANSFORMATIVE SOCIAL POLICY PERSPECTIVE РОЗВИТОК НАВИЧОК ЧЕРЕЗ СЕТА ТА S-СИСТЕМУ В ПІВДЕННІЙ АФРИЦІ ТА БРАЗИЛІЇ: ПЕРСПЕКТИВА ТРАНСФОРМАЦІЙНОЇ СОЦІАЛЬНОЇ ПОЛІТИКИ. *Professional Pedagogics*. 1. 116-130. 10.32835/2707-3092.2024.28.116-130.
- Tengan, C., Kissi, E., Asigri, T., & Eshun, B. (2020). Challenges and strategies towards entrepreneurship education and learning among Ghanaian built environment students. *Journal of Engineering Research and Reports*, 17, 28. <https://doi.org/10.9734/jerr/2020/v15i117135>
- Thomassen, M. (2020). Educational practice and its effect on the educator role in entrepreneurship education, 1, 6. https://doi.org/10.1007/978,981,13,2262,4_170,1
- Thorne, S., Bultz, B. D., Baile, W. F., & Canada, A. L. (2020). Quality in qualitative research: an overview. *International Journal of Nursing Studies*, 105, 103555. <https://doi.org/10.1016/j.ijnurstu.2020.103555>
- Thusi, X., & Selepe, M. (2023). Interrogating basic values and principles governing “ideally” public administration: A case of South African public sector. *Social Sciences and Education Research Review*, 10(1), 242–248. <https://doi.org/10.5281/zenodo.8151129>
- Tondi, N. M. (2023). CHALLENGES FACED BY TVET ENTREPRENEURSHIP GRADUATES IN ESTABLISHING THEIR OWN BUSINESSES.
- Toyon, M. (2021). Explanatory sequential design of mixed methods research: Phases and challenges. *International Journal of Research in Business and Social Science* (2147–4478). 10. 253–260. 10.20525/ijrbs.v10i5.1262.

- Triandini, E. & Satria Wijaya, I Gusti Ngurah & Suniantara, I Ketut & Wulandari, Riza & Pratami, Wayan & Sugiarto, Sugiarto & Djarkasih, Ahmad & Sulyani, Agnesia & Larasati, Niken & Kuswanto, Djoko. (2023). Analysis Adoption of Information Technology Using the UTAUT Method on Off-taker Poultry Farmers in Indonesia. 1716-1728. 10.46254/AN13.20230481.
- Tshehla, S., Chodokufa, K., & Costa, K. (2021). Entrepreneurship education's influence on learners' entrepreneurship intention in South African schools. <https://doi.org/10.31730/osf.io/gpn98>
- Ukgoda, H. (2025). Gamification in Education: Its Impact on Engagement, Motivation, and Learning Outcomes. *Journal of Educational Technology Development and Exchange*. 18. 41–66. 10.18785/jetde. 1803.03.
- Ulum, Ö. G. (2025). Cultural influences on learning motivation: A comparative study of informal learning practices among Syrian refugee and Turkish child labourers in Turkey. *Children and Youth Services Review*, 173, Article 108316. <https://doi.org/10.1016/j.childyouth.2025.108316>
- United Nations Industrial Development Organization. (2021). *Green industrial skills for a sustainable future: Learning and Knowledge Development Facility (LKDF) Forum 2020 — Outcome book*. UNIDO. [https://www.unido.org/sites/default/files/files/2021-02/LKDFForum-2020 Green-Skills-for-a-Sustainable-Future.pdf](https://www.unido.org/sites/default/files/files/2021-02/LKDFForum-2020%20Green-Skills-for-a-Sustainable-Future.pdf)
- Urbano, D, Alvarez, C, & Lopez, T. (2025). Towards a comprehensive framework of the institutional dimensions in entrepreneurship research. *Small Business Economics*. 1–58. 10.1007/s11187-025-01124-0.
- Utami, H.& Alamanos, E. (2023). Resource-Based Theory: A review. In S. Papagiannidis (Ed.), *TheoryHub Book*. Available at <https://open.ncl.ac.uk/>
- Valencia, M. M. A. (2022). Principles, scope, and limitations of the methodological triangulation research strategy [Review article]. *Frontiers in Psychology*, 13, 710–725. <https://doi.org/10.3389/fpsyg.2022.710725>
- Van Kradenburg, M. (2025). *Skills Development Levy (SDL) in South Africa: A Practical Business Guide*. LE Consult Group. <https://leconsultgroup.com/skills-development-levy-south-africa-guide/>
- Van Staden, W. (2020). Climate-smart innovation tool: an approach to review the climate responsiveness and innovation practices of the agricultural curricula. *South African Journal of Agricultural Extension (SAJAE)* 48. <https://doi.org/10.17159/2413->

- Venesaar, U., Malleus, E., Arro, G., & Toding, M. (2021). Entrepreneurship Competence Model for Supporting Learners Development at All Educational Levels. *Administrative Sciences*. 12. 2. 10.3390/admsci12010002.
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 36(1), 157–178. <https://doi.org/10.2307/41410412>
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2016). Unified theory of acceptance and use of technology: A synthesis and the road ahead. *Journal of the Association for Information Systems*, 17(5), 328–376. <https://doi.org/10.17705/1jais.00428>
- Vimbelo, S., & Bayaga, A. (2023). Current pedagogical practices employed by a technical vocational education and training college's mathematics lecturers. *South African Journal of Higher Education*, 37(4), 305–321. <https://doi.org/10.20853/37-4-5292>
- Vorster, S. & Thaba, S. (2025). Exploring Funding Options for Female Entrepreneurs in Rural Areas in South Africa. *Administrative Sciences*. 15. 375. 10.3390/admsci15100375.
- W&R SETA. (2021). *The Evaluation of Blended Learning and Training Interventions*. W&R SETA. Retrieved from <https://www.wrseta.org.za/downloads/2020-21/The%20Evaluation%20of%20Blended%20Learning%20and%20Training%20Interventions.pdf>
- W&RSETA. (2023). *Impact evaluation study on the Rural Areas Learnership (Informal Small Business Practice)*. Pretoria: Wholesale & Retail Sector Education and Training Authority. Retrieved November 30, 2025, from <https://www.wrseta.org.za/downloads/Evaluation%20Report%20Rural%20Areas%20Learnership%20-%20%20Final.pdf>
- W&RSETA. (2023). *Sector Skills Plan (SSP) 2024–2025* (Final submission, updated 01 August 2023). <https://www.wrseta.org.za/sites/default/files/2024-02/Sector%20Skills%20Plan%202024-25.pdf>
- Wagner, R., Huemann, M. & Radukkov, M. (2022). An institutional theory perspective on the role of project management associations in the projectification of society: the case of Germany. *International Journal of Managing Projects in Business*, 15(8): 1, 22.
- Wahyuningsih, R., Joyoatmojo, S., Wardani, D., & Noviani, L. (2025). Work-Integrated Learning to Improve Work Readiness of Vocational Education in School and Madrasah. *Munaddhomah: Jurnal Manajemen Pendidikan Islam*. 6. 586–602.

- 10.31538/munaddhomah.v6i4.1928.
- Walton, E. & Engelbrecht, P. (2022). Inclusive education in South Africa: path dependencies and emergencies. *International Journal of Inclusive Education*, 28(10), 2138, 2156. <https://doi.org/10.1080/13603116.2022.2061608>
- Wang, R., Zhang, G. (2025). Does optimising the business environment enhance enterprise resilience? The role of digital innovation and entrepreneurial spirit. *Humanities and Social Sciences Communications* 12. <https://doi.org/10.1057/s41599-025-04704-3>
- Wang, Y. (2024). The Influence of Cultural Factors on Learning Styles. *Journal of Education, Humanities, and Social Research*. 1. 1–9. 10.70088/ra42wn16.
- Wao, H., Wao, M.A., Abdulatif, R., Omollo, S.B., Mutua, C.K., Kuria, J.W., Kadengye, D.T. (2025). A Mixed Methods Evaluation of the Impact of Short Course Training Program in Implementation Research in East Africa. *Global Implementation Research and Applications* 5, 380–392. <https://doi.org/10.1007/s43477-025-00166-6>
- Ward, M., & Rosenberg, E. (2020). *High-level monitoring and evaluation (M&E) framework for the SETA environment*. BANKSETA / Rhodes University. <https://www.bankseta.org.za/wp-content/uploads/2021/01/High-level-ME-Framework-for-SETA-Environment.pdf>
- Wasti, S. P., Simkhada, P., van Teijlingen, E. R., Sathian, B., & Banerjee, I. (2022). The Growing Importance of Mixed-Methods Research in Health. *Nepal journal of epidemiology*, 12(1), 1175–1178. <https://doi.org/10.3126/nje.v12i1.43633>
- Wentworth, J. & Martin, S. (2025). Culturally Responsive Curriculum Development in Adult Learning Programs.
- Westhuizen, J. (2024). The role of small, medium, and micro enterprises in contributing to the socioeconomic development of South Africa. *International Journal of Research in Business and Social Science* (2147–4478). 13. 606–619. 10.20525/ijrbs.v13i7.3716.
- White, R., Dippenaar, H., & Steenkamp, A. (2025). From legacy to labour market: Aligning QCTO Occupational qualifications with industry demands in African TVET.
- Wholesale and Retail Sector Education and Training Authority. (2024). *W&R SETA Annual Report 2023/24*. https://www.wrseta.org.za/sites/default/files/2024-10/W%26RSeta_AR%202024.pdf
- World Bank. (2020). *Skills development in South Africa: Identifying issues for further analysis* (Report No. P1719940). <https://documents1.worldbank.org/curated/en/099063023125520718/pdf/P1719940b8f0>

- Wu, L., Jiang, S., Wang, X., Yu, L., Wang, Y., Pan, H. (2022). Entrepreneurship Education and Entrepreneurial Intentions of College Students: The Mediating Role of Entrepreneurial Self-Efficacy and the Moderating Role of Entrepreneurial Competition Experience. *Frontiers in Psychology* 12. <https://doi.org/10.3389/fpsyg.2021.727826>
- Xue, L., Mat Rashid, A., & Ouyang, S. (2024). The unified theory of acceptance and use of technology (UTAUT) in higher education: A systematic review. *SAGE Open*, 14(1). <https://doi.org/10.1177/21582440241229570>
- Xue, L., Rashid, A. M., & Ouyang, S. (2024). The Unified Theory of Acceptance and Use of Technology (UTAUT) in Higher Education: A Systematic Review. *SAGE Open*. <https://doi.org/10.1177/21582440241229570>
- Xueying, T. (2024). Governance Framework and Implementation Paths of the Green Transformation of Vocational Education and Training in the European Union. 10.29180/978-615-6886-04-0_21.
- Yang, S., Yu, S., Li, L. (2025). Resource acquisition, entrepreneurial competence, and entrepreneurial growth performance of new farmers. *Frontiers in Sustainable Food Systems* 9. <https://doi.org/10.3389/fsufs.2025.1545721>
- Ye, J & He, Z & Bai, B & Wu, Y. (2024). Sustainability of Technical and Vocational Education and Training (TVET) along with Vocational Psychology. *Behavioral Sciences*. 14. 859. 10.3390/bs14100859.
- Yuan, Y. & Sun, Y. (2024). Practices, Challenges, and Future of Digital Transformation in Smallholder Agriculture: Insights from a Literature Review. *Agriculture*. 14. 2193. 10.3390/agriculture14122193.
- Yusop, S.R.M., Rasul, M.S., Mohamad Yasin, R., Hashim, H.U., Jalaludin, N.A. (2022). An Assessment Approaches and Learning Outcomes in Technical and Vocational Education: A Systematic Review Using PRISMA. *Sustainability* 14, 5225. <https://doi.org/10.3390/su14095225>
- Zegeye, E. W., Chipfupa, U., Baloyi, R. J., Rambuda, H., & Masango, B. (2023). *Entrepreneurial development for establishing small farming businesses and employment by youth in rain-fed crop farming* (WRC Report No. 2789/1/23). Water Research Commission. <https://www.wrc.org.za/wp-content/uploads/mdocs/2789%20final.pdf>
- Zervas, I. & Stiakakis, E. (2024). Digital skills in vocational education and training: Investigating the impact of Erasmus, digital tools, and educational platforms. *Journal of Infrastructure*

- Policy and Development. 8. 8415. 10.24294/jipd.v8i8.8415.
- Zhang, X., Qian, W., & Chen, C. (2024). The effect of digital technology usage on higher vocational student satisfaction: The mediating role of learning experience and learning engagement. *Frontiers in Education*, 9, 1508119. <https://doi.org/10.3389/feduc.2024.1508119>
- Zhong, Z., Juwaheer, S. (2024). Digital competence development in TVET with a competency-based whole-institution approach. *Vocation, Technology & Education* 1. <https://doi.org/10.54844/vte.2024.0591>
- Zhou, J., Yang, J., Sun, H., Liu, Y., & Liu, X. (2021). The Influence of Entrepreneurial Cognition on Business Model Innovation: A Hybrid Method Based on Multiple Regressions and Machine Learning. *Frontiers in psychology*, 12, 744237. <https://doi.org/10.3389/fpsyg.2021.744237>
- Zvarimwa, C, & Zimuto, J. (2022). Valuable, rare, inimitable, non-substitutable and exploitable (VRINE) resources on competitive advantage. *EPH - International Journal of Business & Management Science*. 8. 10.53555/ephbms.v8i1.1915.
- Zweni, N. (2023). Employee participation in training and development interventions at a selected municipality. *SA Journal of Human Resource Management* 21. <https://doi.org/10.4102/sajhrm.v21i0.2258>

ANNEXURES

INFORMED CONSENT LETTER

**UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP**

Doctor of Business Administration

Researcher: Thando Nxele [REDACTED]

223058549@stu.ukzn.ac.za

Supervisor: Dr Tony Ngwenya (031 260 7825)

ngwenyat2@ukzn.ac.za

Research Office: hssrec@ukzn.ac.za (031 260 8350/3587)

Assessing the effectiveness of Sector Education and Training Authority learnerships in promoting entrepreneurial growth: A case study of AgriSeta, Eastern Cape Province, South Africa.

Dear Respondent

I am Thando Nxele, a DBA candidate at the GSB&L, UKZN. I am conducting a research study as part of my degree requirements and inviting you to participate in my research project. This letter provides information about the study to help you decide whether you want to participate.

1. Purpose of the Study:

The study aims to assess the effectiveness of SETA (Sector Education and Training Authority) learnerships in promoting entrepreneurial growth, explicitly focusing on AgriSETA in the Eastern Cape Province.

2. Study Procedures:

The study will use a mixed-method approach, including quantitative and qualitative data collection methods. If you agree to participate, you will be asked to complete a questionnaire and participate in a semi-structured interview. The questionnaire will include closed and open-ended questions related to the research objectives and will take approximately 20 minutes to complete.

The semi-structured interview will take around 40 minutes.

3. Voluntary Participation:

Your participation in this study is entirely voluntary. You have the right to withdraw from the study at any time without penalty or loss of benefits to which you are otherwise entitled. If you decide to withdraw, the information collected from you before withdrawal may still be used in the research unless you specifically request otherwise.

4. Confidentiality:

All information collected in this study will remain confidential and will be used for research purposes only. Your identity will not be disclosed in any reports or publications resulting from this study. Data will be stored securely and will only be accessible to the research team. Pseudonyms will be used to protect your identity.

5. Risks and Benefits:

There are no known risks associated with participating in this study. While there may not be direct benefits to you, your participation will contribute to a better understanding of the effectiveness of AgriSETA learnerships in promoting entrepreneurial growth, which could inform future policies and practices.

Please contact either my supervisor or me if you have any questions or require additional information about the study.

Sincerely

Thando Nxele

Date

CONSENT:

By signing this consent form, you agree to participate in the study and confirm that you have read and understood the information above.

I, _____ (Participant's Name), have read and understood the study details. I agree to participate in the study voluntarily.

Participant's Signature

Date

Thank you for your time and participation.

QUESTIONNAIRE FOR AGRISETA LEARNERSHIP PARTICIPANTS

SECTION A: DEMOGRAPHIC INFORMATION

		Tick
1.	Age:	
	18-25	
	26-35	
	36-45	
	46-55	
	56 and above	
2.	Gender:	
	Male	
	Female	
	Other	
3.	Highest Level of Education:	
	No formal education	
	Primary school	
	High school	
	Diploma/Certificate	
	Bachelor's degree	
	Postgraduate degree	
4.	Region:	
	Urban	
	Rural	

SECTION B: PARTICIPATION IN AGRISETA LEARNERSHIP

5.	How did you learn about the AgriSETA learnership programme?	
	Advertisement	
	Referral	
	Community organisation	
	Other (please specify)	
6.	What year did you participate in the AgriSETA learnership programme?	
	2021	
	2022	
	2023	
	2024	
	Other (please specify)	
7.	Which specific AgriSETA learnership programme did you participate in?	
	Livestock farming	
	Crop production	
	Agricultural business management	
	Other (please specify)	

SECTION C: IMPACT ON ENTREPRENEURIAL SKILLS AND COMPETENCIES

8.	To what extent did the learnership improve your technical agricultural skills?	
	Not at all	
	To a small extent	
	To a moderate extent	
	To a great extent	
	To a very great extent	
9.	To what extent did the learnership improve your general business competencies?	
	Not at all	
	To a small extent	
	To a moderate extent	
	To a great extent	
	To a very great extent	
10.	How confident do you feel about starting your business after completing the learnership?	
	Not confident	
	Slightly confident	
	Moderately confident	
	Very confident	
	Extremely confident	
11.	Have you started your own agricultural business since completing the learnership?	
	Yes	
	No	

12.	If yes, how long after completing the learnership did you start your business?	
	Immediately	
	Within 6 months	
	Within 1 year	
	More than 1 year	
13.	What challenges have you faced in starting and running your business? (Select all that apply)	
	Lack of funding	
	Limited access to markets	
	Inadequate training facilities	
	Lack of mentorship and ongoing support	
	Other (please specify)	

SECTION D: EVALUATION OF LEARNERSHIP PROGRAMME

14.	How would you rate the quality of the training you received during the learnership?	
	Poor	
	Fair	
	Good	
	Very good	
	Excellent	
15.	How relevant was the curriculum to your objective and world agricultural entrepreneurial needs?	
	Not relevant	
	Slightly relevant	
	Moderately relevant	
	Very relevant	

	Extremely Relevant	
16.	To what extent did the programme address digital literacy, climate, and innovative agricultural practices?	
	Not at all	
	To a small extent	
	To a moderate extent	
	To a great extent	
	To a very great extent	
17.	How effective was the collaboration between AgriSETA and other stakeholders (e.g., industry representatives, financial institutions) in supporting your entrepreneurial activities?	
	Not effective	
	Slightly effective	
	Moderately effective	
	Very effective	
	Extremely effective	

SECTION E: RECOMMENDATIONS AND FEEDBACK

18.	What improvements would you suggest for the AgriSETA learnership programme to better support aspiring agricultural entrepreneurs?

19.	Any additional comments or suggestions?
Thank you for participating.	

INTERVIEW GUIDE

SECTION A: Demographic details of participant

1.	Your Title:	
2.	Organisation:	
3.	Location:	
4.	Gender:	
	Male	
	Female	
	Other (please specify):	
5	Years of experience in conducting or overseeing AgriSETA learnerships:	
	0-2 years	
	3-5 years	
	6-7 years	
	8-9 years	
	10 years or more	

SECTION B: Effectiveness of AgriSETA learnerships in promoting entrepreneurial skills and competencies

6. Based on your experience, how effective are AgriSETA learnerships in providing entrepreneurial skills and competencies to trainees?
7. Can you provide specific examples of former trainees who have successfully applied the skills and competencies gained from AgriSETA learnerships in their entrepreneurial ventures?
8. In cases where former trainees' entrepreneurial ventures have failed, to what extent do you attribute this failure to gaps or limitations in the AgriSETA learnership programme?
9. How do the institutional context and power dynamics within AgriSETA and partner organisations influence the effectiveness of the learnerships in promoting entrepreneurial skills and competencies?

SECTION C: Impact of AgriSETA learnerships on the entry of new entrepreneurs

10. To what extent have AgriSETA learnerships contributed to the creation of new entrepreneurial ventures by former trainees?
11. What skills and competencies gained from AgriSETA learnerships have been most valuable for trainees in starting their businesses?
12. How do AgriSETA and partner organisations track and monitor the entrepreneurial activities of former trainees to assess the impact of the learnerships on new venture creation?
13. What barriers or challenges do former AgriSETA trainees face in transitioning from the learnership programme to starting their entrepreneurial ventures?

SECTION D: Collaboration of entrepreneurship, innovation, and digitalisation in AgriSETA learnerships

14. To what extent does the current AgriSETA learnership curriculum incorporate elements of entrepreneurship, innovation, and digitalisation?
15. How can the integration of entrepreneurship, innovation, and digitalisation in the AgriSETA learnership curriculum be improved to better address the needs of prospective entrepreneurs?
16. What role can partnerships with industry, academia, and government play in enhancing the collaboration of entrepreneurship, innovation, and digitalisation in AgriSETA learnerships?

SECTION E: Role of AgriSETA learnerships in accelerating market absorption opportunities

17. How do AgriSETA learnerships currently contribute to the market absorption of trainees into the agricultural sector?
18. What skills and competencies gained from AgriSETA learnerships are most valuable for trainees in securing employment or market opportunities in the agricultural sector?
19. How can the AgriSETA learnership curriculum be enhanced to better align with the skills and competencies demanded by the agricultural market?
20. What partnerships or collaborations can AgriSETA and partner organisations pursue to increase market absorption opportunities for learnership graduates?

SECTION F: Proposed framework for enhancing entrepreneurship education in AgriSETA learnerships

21. Based on your experience and insights, what key components should be included in a framework for enhancing entrepreneurship education's application, monitoring, and evaluation in AgriSETA learnerships?
22. How can the institutional context and power dynamics within AgriSETA and partner organisations be leveraged to support the implementation of such a framework?
23. What role can the Functional Theory of Value and Resource-Based View play in informing the design and delivery of entrepreneurship education in AgriSETA learnerships?
24. How can the proposed framework be operationalised and sustained over time to ensure the continuous improvement of entrepreneurship education in AgriSETA learnerships?

Thank you for your participation!

GATEKEEPERS LETTER



P O Box 23378, Gezina, 0031
AgriSETA House
529 Belvedere Street, Arcadia, 0083
Tel: (012) 301 5600
Fax: (012) 325 1677
Website: www.agriseta.co.za
Email: info@agriseta.co.za

Ms. / Mr .Thando NXele
University of KwaZulu Natal (Student – No-223058549)
Email: 223058549@stu.ukzn.ac.za
Mobile: [REDACTED]

Dear Ms/Mr Nxele

**RE: LETTER OF PERMISSION TO CONDUCT STUDY RESEARCH WITH
AGRISETA ON A TOPIC: "Assessing the Effectiveness of SETA Learnerships in
Promoting Entrepreneurial Growth: A Case Study of AgriSETA, Eastern Cape,"**

This letter serves to permit you to conduct research with the AgriSETA as part of
your Doctor of Business Administration studies through KwaZulu Natal University.

This research may include interviews and/or surveys and the approval is granted
providing the information gathered is used solely for research purposes and that the
research dissertation is shared with the AgriSETA upon completion.

All the best with your research

Sincerely

[REDACTED]
Innocent Sirovha(Dr)
Chief Executive Officer
23 July 2024

• Ms GS Sepeng - Chairperson • Innocent Sirovha (Dr) - Chief Executive Officer • Ms M Burger - Member • Ms B Cele - Member • Ms L Gqokoma - Member
• Mr A Kriel - Member • Ms P Luwaca - Member • Mr M Mahanjana - Member • Adv. E Mhlongo - Member • Mr M Mngomezulu - Member • Ms S Mthembu - Member
• Mr A Rabe - Member • Ms K Senyatsi - Member • Mr K Tsimatsima - Member • Mr C van der Rheede - Member • Mr M Danga - Company Secretary

LOVEDALE CONFIRMATION LETTER



higher education
& training

Department of
Higher Education and Training
REPUBLIC OF SOUTH AFRICA



**LOVEDALE
TVET COLLEGE**

HEADQUARTERS

Private Bag 27423
KING WILLIAM'S TOWN
6000
Tel: 044 854 0700
047 238 2223/4000

ALICE CAMPUS

Private Bag 11300
ALICE
6000
Tel: 044 855 1171
047 238 2723/3000

KING CAMPUS

Private Bag 27408
KING WILLIAM'S TOWN
6000
Tel: 044 854 0700
047 238 2723/3000

ZWILLITSHA CAMPUS

Private Bag 2010
ZWILLITSHA
6000
Tel: 044 854 1516/18
047 238 2223/4000

Enquiries: isaac.mbengo@lovedale.org.za

: Acting Principal

01 November 2024

Dear Thando Nxole

LOVEDALE TVET COLLEGE RESEARCH APPROVAL

Research Title:

"Assessing the Effectiveness of SETA Learnerships in Promoting Entrepreneurial Growth: A Case Study of AgriSeta, Eastern Cape."

We are pleased to announce that we have approved your request to gather data from staff at Lovedale TVET College for your research dissertation!

To ensure a smooth collaboration, we kindly ask that you adhere to the following two conditions:

- Please share your study's results with the college.
- Ensure that the study does not interfere with tuition times, and that educators are not required to compromise their teaching periods because of their involvement in the study.

We are excited about your research and look forward to seeing the results. Best of luck with your project!

Kind Regards


Mr IT Mbengo
Acting College Principal

 LovedaleTVETCollege
 info@lovedale.org.za

www.lovedale.edu.za

PERFORMERS TODAY, WINNERS TOMORROW!

ETHICAL CLEARANCE



25 March 2026

Thando Raymond Nxele (223058549)
Grad School of Bus & Leadership
Westville Campus

Dear TR Nxele,

Protocol reference number: HSSREC/00008125/2025

Project title: Assessing the effectiveness of sector education and training authority learnerships in promoting entrepreneurial growth: A case study of AgriSeta, Eastern Cape

Amended Project title: Assessing the effectiveness of Sector Education and Training Authority learnerships in promoting entrepreneurial growth: A case study of Agriset, Eastern Cape Province, South Africa.

Degree: PhD

Approval Notification – Amendment Application

This letter serves to notify you that your application and request for an amendment received on 25 March 2026 has now been approved as follows:

- Change in title

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form; Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

HSSREC is registered with the South African National Health Research Ethics Council (REC-040414-040).

Best wishes for the successful completion of your research protocol.

Yours faithfully

Dr Shamila Naidoo (Interim Chair)

/dd

Humanities & Social Sciences Research Ethics Committee
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Tel: +27 31 260 8350 / 4557 / 3587

Website: <http://research.ukzn.ac.za/Research-Ethics/>

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

INSPIRING GREATNESS