



Transformation through institutional peering - Agricultural Training Institutes learning from each other

Experiences from a Dutch-South African partnership

Chaminuka P. Nompozolo S. Ceballos-Müller J.
Lalendle L.L. Viljoen M. Brouwers J.H.A.M.



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Abstract UK: This report provides a synthesis of the main learning experiences emanating from a South African-Dutch project that supported the transformation of Agricultural Colleges into Agricultural Training Institutes. The project was implemented from 2011 to 2015 and involved twelve Agricultural Training Institutes, the South African Department of Agriculture, Forestry and Fishery, and four partners based in The Netherlands (CDI, MDF, ICRA and AERES). Funding was provided by the South African Government and EP-Nuffic. The partners created action learning structures addressing Competence Based Learning, Quality Assurance, Policies, Rural Wealth Creation, Gender, and ICT and Information Systems.

Abstract NL: Dit rapport geeft een synthese van de leerpunten van een project tussen Zuid Afrikaanse en Nederlandse partners die de transformatie ondersteunden waarbij Zuid Afrikaanse landbouw hogescholen veranderden naar landbouw trainingsinstituten. Het project werd uitgevoerd gedurende de periode 2011-2015 met 12 landbouw hogescholen, het Zuid Afrikaanse Ministerie van Landbouw, Bosbouw en Visserij, en vier partners in Nederland (CDI, MDF, ICRA en AERES). Financiering kwam beschikbaar via de regering van Zuid Afrika en het EP-Nuffic. Project partners maakten een leeromgeving waarbij partners van elkaar leerden op de thema's competentie gericht leren, kwaliteitsbewaking, beleid, meerwaarde creatie voor rurale gebieden, gender en ICT met informatie beheer.

Keywords: Competence Based Learning, Quality Assurance, Rural Wealth Creation, Gender, ICT, Information Systems, Transformation, Agricultural Colleges and Training Institutes, Education, South Africa.

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Preface

The Netherlands Programme for Institutional Strengthening of Post-secondary Education and Training Capacity (NPT) was launched in June 2002 in replacement of all previous cooperation programmes. In December 2003, South Africa was selected for participation in the new NPT programme. The ICATE project started at the Colleges of Agriculture, and made a start with education and training responsive to the needs of the developing agricultural sector and of the emerging farmers. ICATE can be considered the precedent of the project 'Transforming Agricultural Colleges into Agricultural Training Institutes' (TACATI), implemented under the NICHE programme. The NICHE programme is the successor of NPT, and similar to NPT, the NICHE programme aims at supporting socio-economic development in developing countries through capacity building interventions.

In 2016 we are witnessing the closure of the TACATI project. The project was proposed by the Department of Agriculture, Fisheries and Forestry, to support the transformation process of the eleven Colleges of Agriculture into Agricultural Training Institutes and help them to comply with the national norms and standards. The TACATI experience is distinctive from other NICHE capacity building projects due to the strong focus on 'learning from each other'. The 'Communities of Learning and Action' between the Agricultural Training Institutes and DAFF, at the heart of the project, are models for good practices, combining knowledge, skills and attitudes and promoting gender sensitive and labour market oriented agricultural services.

This book presents experiences and lessons learned by the partners in South Africa and the Netherlands involved in the project. By supporting this initiative, EP-Nuffic hopes to have contributed to strengthen educational models that will improve the sustainable livelihood of (small) farmers, men and women, in South Africa. We hope that the wisdom and learning spirit of new Communities of Learning and Action will inspire us all to be innovative in facing the challenges of a new era of development cooperation.

Rosa Borges

Senior Programme Administrator, Capacity Building Department, EP-Nuffic
The Hague, February 2016

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A special thanks goes to the authors of the respective chapters of this book. We highly appreciate their willingness to document the lessons learnt from the project.

Editors and project management

February 2016

List of abbreviations and acronyms

APAC	Association of Principals of Agricultural Colleges
ATE	Agricultural Tertiary Education
ATI	Agricultural Training Institute
CASP	Comprehensive Agricultural Support Programme
CBL	Competency Based Learning
CDI	Centre for Development Innovation (formerly Wageningen International)
CHE	Council on Higher Education
CIAT	Cape Institute for Agricultural Training
COLA	Community Of Learning and Action
CRP	College Revitalization Plan
DAFF	Department of Agriculture, Forestry and Fisheries
DLO	Directorate of Agricultural Research [Netherlands]
EP-Nuffic	EP-Netherlands organisation for international cooperation in higher education
ERP	Extension Recovery Programme
ETES	Education, Training and Extension Services
FET	Further Education and Training
HEQC	Higher Education Qualification Committee
ICATE	Improving the Capacity of Agricultural Training and Education
ICRA	International Centre for development oriented Research in Agriculture
LRAD	Land Redistribution for Agricultural Development
MDF	MDF Training & Consultancy
M&E	Monitoring & Evaluation
NICHE	Netherlands Initiative for Capacity development in Higher Education
NFP	Netherlands Fellowship Programme
PDA	Provincial Department of Agriculture
PGA	Participatory Gender Audit
PTC+	Practise & Training Centre (AERES Group)
QCTO	Quality Council for Trades and Occupations
RIa	Research in Action
RSA	Republic of South Africa
RWC	Rural Wealth Creation
SAQA	South African Qualifications Authority
SETA	Sector Education and Training Authority
TACATI	Transforming the Agricultural Colleges into Agricultural Training Institutes
ToR	Terms of Reference
WIL	Work Integrated Learning
WUR	Wageningen University and Research centre

Summary

In line with the Colleges Revitalisation Plan (CRP) of the Government of South Africa, whose focus is on ensuring that Colleges of Agriculture operate as Centres of Excellence (COEs), an agreement was signed between the Kingdom of The Netherlands and the Republic of South Africa to support this revitalisation programme. A project proposal was submitted by the Department of Agriculture, Forestry and Fisheries (DAFF) jointly with Dutch partners through the Netherlands University Foundation for International Cooperation (EP-Nuffic) under the Netherlands Initiative for Capacity Development in Higher Education. A grant was awarded to support the transformation process of the twelve (later eleven) Colleges of Agriculture into Agricultural Training Institutes (ATIs) in South Africa and help them to comply with the Norms & Standards. Hence the name of the project: Transforming Agricultural Colleges into Agricultural Training Institutes: TACATI. The partners developed the concept of Communities of Learning and Action (COLAs) between colleges and DAFF to enhance the required changes.

The book exposes the reader to the contributions TACATI made to the transformation agenda of turning Colleges of Agricultural Colleges into ATIs in South Africa and to share the experiences, outcomes and lessons learnt. The book provides opportunities for referencing and continued learning by Agricultural Colleges locally and internationally, and illustrates best practices in managing transformation driven projects in the field of vocational training.

Communities of Learning and Action (COLAs)

COLAs were an innovation of the project, to facilitate collaboration by multiple stakeholders towards multiple objectives. They were demand driven and addressed felt needs by taking the responsibility to address a specific challenge/problem related to the transformation process at the colleges. In addition, they facilitated joint learning by bringing together good practices and shared interests of those who chose to participate.

The COLA allowed staff from different ATIs to come together, who had never met before. Colleagues in similar functions across the ATI's shared ideas and practices for Quality Assurance (QA), Competence Based Learning (CBL), Rural Wealth Creation (RWC) and Gender Mainstreaming (GM). This led to shared and common understanding of the same concepts and the production of concrete products tailored to the characteristics of the ATI's and their clients. Overarching topics like Quality Assurance and Gender have produced documents which allow the ATIs to use similar documents for addressing these topics. This has created a common environment where peers learn from each other and that has had an influence on how the ATI's approaches relate to each other.

The staff across the ATI's have had cross visits to each other during workshops and audits and that brought a positive light to the ATI's. Colleagues had the opportunity to see the infrastructure and systems of other ATI's wherein they themselves can adopt and modify to fit their practices and functions. This project created the platform for networking between the colleges almost at all levels, where the staff members are able to request an advice and could serve as the external examiners between each other. In addition, it has created collegiality at personal and institutional level which facilitates communication and further exchange.

Current and future impact

The COLA approach allowed new topics to be addressed like Rural Wealth Creation (RWC), requiring a paradigm shift and new ways of thinking. RWC takes stock of value addition, outreach, improved rural income and welfare and opportunities to create employment. In doing this the social aspects of the initiatives and capacity building need not to be ignored. This is a way of introducing a business approach and trace the socio-economic impact of the initiatives that ATI's are involved in.

Also attention for gender mainstreaming aspects in all elements of the ATI was new. For many staff it was the first time to explicitly reflect on gender aspects in the ATI organisational set-up as well as in relation to content matters for education and training services. The base has been put but further attention and support will be required.

Quality assurance (QA) - which was a well know topic but without the necessary skills and knowledge - has put itself on the map with clear policy guidelines and instruments. All ATIs have experienced the QA assessment and the notion of all staff being responsible for QA instead of one specialist, is gaining understanding.

The Competence Based Learning (CBL) approach has been strengthened for Further Education Training (FET) and Higher Education (HE). Curricula have been developed and staff feel more confident. Some ATIs have fully embraced the CBL approach, other still need more managerial support for allowing staff to develop and implement accordingly.

Implications for policy and practice

All COLAs analysed and reflected on the lessons learnt and the way forward. Main conclusions are:

CBL is an approach to learning that invites the outside world into the ATI. It requires the teacher to play different roles: trainer, coach, networker. It requires the teacher to have practical knowledge and experience not only in teaching, which is obvious, but also in the profession(s) he/she is dealing with. Once the ATI has accepted CBL as the training methodology the management should create an environment for trainers and learners where this can flourish.

Going forward, there is need for a clear position regarding CBL in the ATIs at policy level, and at management level to support the process and further invest in the activities necessary to enhance a smooth delivery of a CBL curriculum. The ATIs could consider a budget to form disciplinary fora that allow exchange of ideas and best practice between staff from the same discipline. The steps followed in curriculum design and the resultant Generic Curriculum Framework provides institutions beyond agriculture and at various levels, a mode by which they can update, modify and develop new curricula for their specific requirements.

Concerning Quality Assurance in the ATIs, there is low support from the authorities and staff to create the required support for the ATIs. Quality Assurance is still by far and largely considered to be centred on one person who has been assigned the responsibility instead of it being owned by everyone. In general, aspects of quality are limited to academic programmes and accreditation processes leaving out the support activities and staff in quality assurance aspects. Looking ahead, the continuation of quality assurance practices will help in bringing light to general quality issues and, in turn, the performance within the ATIs will improve.

Although DAFF is convinced of the need to pay more attention to gender/diversity - and this is supported by several national policies dealing with aspects of gender - the implementation of these policies at an operational level is inadequate to affect meaningful change, indicating that the gender/diversity topic is still an area which requires a great deal of advocacy.

ATIs are seen as strategic tools to drive RWC, with staff having a variety of skills to support farmers with the skills necessary to improve agricultural production along the whole value chain and access to inputs and output market. For ATIs to become centres of excellence for RWC, effective and significant RWC programmes that are responsive to that need must be developed and implemented. To ensure that this happens, there is a need to improve resources of the ATIs (infrastructure, IT, funding model and human capital) and outreach programmes (community engagements, partnerships, community based research and capacity building).

The Dutch-South African Partnership through TACATI contributed to the implementation of the National Agricultural Education and Training-policy in South Africa, which is driven towards ensuring that new and previously disadvantaged land users in South Africa will be better supplied with educational services.

The ATI's have been reorganised and are able now to serve their new clients and address the needs of their respective Provinces.

1 Introduction and background

Nompozolo, S. and Brouwers, J.H.A.M.

This book is the outcome of a project on supporting the Transformation of Colleges of Agriculture into Agricultural Training Institutes (TACATI) that was co-sponsored by the Royal Netherlands Government and the Department of Agriculture, Forestry and Fisheries (DAFF).

The TACATI project was the culmination of the hard work and input made by the South African Agricultural Training Institutes in collaboration with the consortium of the Dutch and the South African Agricultural experts. The project was triggered by the Colleges Revitalisation Plan (CRP) of DAFF whose focus is on transforming Colleges of Agriculture into Agricultural Training Institutes (ATIs) to operate as Centres of Excellence in their areas of agricultural skills training. ATIs are unique in the tertiary education as they focus mainly on vocational agricultural education skills training.

The purpose of the book is to expose the reader to the contributions TACATI made to the transformation agenda of turning Colleges of Agricultural Colleges into ATIs in South Africa and to share the experiences, outcomes and lessons learnt through the life cycle of the TACATI project. The book provides opportunities for referencing and continued learning by Agricultural Colleges locally and internationally, and illustrates best practices in managing transformation driven projects in the field of vocational training.

The Republic of South Africa originally had twelve Colleges of Agriculture when the project started (see Annex 2). The twelfth College which was located in the Mpumalanga Province has since been incorporated into the University of Mpumalanga. For the purposes of this book, the name college is being dropped, as per norms and standards, for Agricultural Training Institute (ATI). Currently there are eleven ATIs in South Africa that provide both Higher Education and Further Education and Training bands in agriculture. The ATIs are located in six of the nine provinces of the country as follows: Cedara and Owen Sitole Colleges in KwaZulu-Natal, Potchefstroom and Taung Colleges in the North West, Cape Institute of Agriculture Training (CIAT)- Elsenburg in the Western Cape, Fort Cox College, Tsolo College and Grootfontein Agricultural Development Institute (GADI) in the Eastern Cape, Glen College in Free State, Madzivhandila and Tompi Selekla Colleges in Limpopo. Northern Cape, Mpumalanga and Gauteng provinces are the only provinces without ATIs. The eleven ATIs are in principle all administered by and are reporting to their respective Provincial Departments of Agriculture except for Grootfontein in Middelburg which is under the National Department of Agriculture, Forestry and Fisheries (DAFF) as a fully-fledged Directorate.

Colleges provide agricultural vocational education and training. They offer an Agricultural Diploma as a three year qualification (NQF level 5-7) and the vocational skills training to the farming community and the youth as NQF levels 1-4 qualification in partnership with the relevant Sector, Education, Training Authorities (SETAs). Unlike Training and Vocational Education and Training institutions, formerly FET Colleges, ATIs deal with practical agriculture aspects such as training agricultural practitioners not just academic graduates, providing first level skills training to farmers, providing short practical courses for farmers and their employees and enhancing production in farming practices.

In 2009, a study to assess the level of compliance of the eleven ATIs (then Colleges) to the approved Norms and Standards was conducted. The assessment study report revealed that no single College complied fully with the established Norms and Standards albeit in differing degrees. Based on the approved Norms and Standards and the Governance and Financing Framework for ATIs, and findings of the compliance study, a Revitalization Plan for the Colleges of Agriculture was developed. The Colleges Revitalization Plan (CRP) was guided by the following critical pillars: Improvement of Infrastructure and equipment, Curriculum review with emphasis on value addition, Accreditation and registration of Colleges, Leadership development and change management, and Strengthening of Information and Communication Technology including Colleges Governance.

In line with the concept of the Colleges Revitalisation plan, whose focus was on ensuring that Colleges of Agriculture operate as Centres of Excellence (COEs), an agreement was signed between the Kingdom of the Netherlands and the Republic of South Africa to support this initiative. A project proposal was submitted by DAFF jointly with Dutch partners through the Netherlands University Foundation for International Cooperation (NUFFIC) under the Netherlands Initiative for Capacity Development in Higher Education (NICHE/ZAF/041). A grant was awarded to support the transformation process of the eleven Colleges of Agriculture into Agricultural Training Institutes in South Africa and help them to comply with the Norms & Standards. Hence the name of the project: Transforming Agricultural Colleges into Agricultural Training Institutes: TACATI.

The project agreement was between the DAFF (the requesting party) and the Centre for Development Innovation (CDI, part of Wageningen University and Research Centre). CDI represented the Dutch consortium consisting of the CDI (lead), MDF-Training & Consultancy, the AERES Group and the International Centre for Development oriented Research in Agriculture (ICRA).

The year 2013 was the first full project year of the TACATI NICHE ZAF-041 project, which started officially mid 2012 after an extended inception phase till June 2012. The project also supported the Comprehensive Agricultural Support Programme (CASP) in South Africa, a programme that assists all agricultural colleges to transform towards becoming Agricultural Training Institutes.

In the inception period it became clear that given the scope of the transition process, it would go beyond the TACATI-project's capacity, to ensure overall compliance with the Norms & Standards and consequently strategic choices had to be made. After consultations with the DAFF and the Association of Principals of Agricultural Colleges (APAC) and Nuffic, it was agreed that for the project to be effective it should focus on two out of the five pillars.

TACATI consequently provided capacity support to the second pillar (accreditation and quality assurance) and the fifth pillar (curricular review and resources including ICT) of the Colleges Revitalisation Plan (CRP) which comprises a College Revitalization Plan based on five pillars. The ultimate project perspective remained "raising the compliance level of the colleges with the agreed Norms & Standards". The partners developed the concept of Communities of Learning and Action (COLAs) between colleges and DAFF to enhance the required changes. The COLA concept will be further elaborated in the book. COLAs and other project activities focussed on educational aspects of curriculum review development, the establishment of a comprehensive quality assurance system, including the development and implementation of a consistent set of policies as well as a comprehensive Management Information System (MIS) between DAFF and the future ATIs. The TACATI project became an effective tool in support of the implementation of the National Agricultural Education and Training-policy in South Africa, which is driven towards ensuring that new and previously disadvantaged land users in South Africa will be better supplied with educational services that are gender sensitive and labour market oriented. Career focussed training programmes, including courses of rural wealth creation, were been created.

The project outputs and implementation confirmed the relevance of the project in terms of assisting DAFF and the Colleges in the transformation process and towards ensuring that ATIs became reorganised and able to serve their new clients and address the needs of their respective Provinces.

1.1 Introducing the TACATI project

The TACATI project comprised the following main elements:

- TACATI found its origins in the consistent application of empowering principles of demand driven ownership, dialogue, consultative and strategic partnerships, and theory informed action;
- TACATI systematically applied the principles of learning organizations, with, from a project intervention perspective, two direct target groups: the Colleges of Agriculture, which became Agricultural Training Institutes and DAFF, especially the Sector Colleges;
- TACATI advocated a competence based and result oriented approach to Human Resource Development and organizational change;

- TACATI facilitated a competence based, work integrated learning and labour-market oriented approach to curriculum development and review with a very practical orientation;
- TACATI created the COLAs, typically consisting of a sequence of self-propelled workshops to enhance the capacity for facilitation of the change processes, which were progressively identified by the ATIs and DAFF;
- TACATI offered a pool of national and international expertise, consisting of a wide range of seasoned and committed professional individuals and organizations, both development practitioners and academic scholars allowing DAFF and the future ATIs to establish meaningful partnerships that would sustain beyond project completion;
- TACATI comprised intensive mentoring and coaching arrangements as a vital component to all the capacity building interventions.

The project as outlined through the project results was very significant in unearthing the level of compliance required of the Agricultural Training Institutes to the set standards of institutes that offer vocational agricultural education and training.

1.2 Introducing Communities of Learning and Action

1.2.1 What is a COLA?

As indicated in the introduction, a main device to achieve the TACATI project results were Communities of Learning and Action (COLA). COLAs were an innovation of the project, to facilitate collaboration by multiple stakeholders towards multiple objectives. They were demand driven and addressed felt needs by taking the responsibility to address a specific challenge/problem related to the transformation process at the colleges. In addition, they facilitated joint learning by bringing together good practices and shared interests of those who chose to participate.

The reason for developing the COLA was to co-create innovative concepts to be embedded in the participating Colleges. On the meta level, COLAs were expected to contribute to the desired harmonization of the Colleges on their way to becoming ATIs, becoming showcases for the added value of mutual consultation and motivators for valorisation, reinforcement and dissemination of innovative knowledge.

At the start of the project, COLAs were formed on the basis of interest. COLAs on the following topics were established: Competence Based Learning - both for Higher Education and Further Education, Quality Assurance, Rural Wealth Creation and Gender Mainstreaming. A Policy COLA was also initiated as well as a MIS (Management & Information System) COLA.

1.2.2 Discussion

An important success factor of such a huge project as TACATI is ownership by the stakeholders; in this case, first of all management and academic staff of the future ATIs and secondly, DAFF officials responsible for the monitoring of the project. In order to create ownership, stakeholders themselves must steer project activities that lead to the achievement of desired results.

This ownership was achieved in the TACATI project: One of the ATIs would take the initiative to lead the COLA, offering to share good practices and experience on a certain topic, relevant to the transition process; or an ATI would identify a special need in the framework of the envisaged transformation process, and choose to develop new knowledge, competencies and/or experiences in close co-operation with other ATIs, who appeared to have the same need. Once a COLA was made up, all participants were committed to actively contribute to its defined outcome(s), and co-operated on the basis of agreed procedures.

The demand driven need for learning on the chosen topics was such that the self-propelling drive worked out quite well. The lead party (often the principal of an ATI) would mobilise the other ATIs. The availability of a budget, partly from the project and partly from the Government of SA (travel

costs) was crucial for allowing the participants to come together. The support of the project coordinator for logistical arrangements (e.g. workshop venue) facilitated the implementation.

The availability of international and/or national experts for professional support in the topic chosen, allowed the COLAs to dive deeper in the topic. Synergy between the Lead of the COLA and experts worked out well in all COLAs. As a team they took the lead for the planning and implementation of the learning events, be it visits to an ATI, assessment of ATI, field visits, and learning sessions for development of new tools.

The implementation of the COLAs faced several challenges: Often the same people were involved in different COLAs, some participants stopped participating after a while, the workload of the COLA coordinator (often a Principal) presented a problem, and often the ATI academic calendar itself interfered. This set back the progress in the COLAs and thus was one of the reasons that the trajectory of a COLA took more than the planned period of time.

The annual COLA “harvest” meeting was a good instrument to report on the progress of the COLA and to exchange experiences between COLAs, bringing COLA coordinators, experts and DAFF together to synergise and take decisions on the way forward.

1.2.3 Conclusions on COLAs

The COLAs brought the staff of different ATIs together and allowed them to visit many ATIs which were unknown to them. This broadened their minds and created understanding of each other’s situation, challenges and specific opportunities, e.g. specialisation domain according to agro-ecological zone and economic context. Through these COLAs staff started identifying themselves as champions and experts of specific areas of focus in the ATIs, thereby helping in transferring ownership of the project activities and objectives.

Staff from the different ATIs also learned to appreciate each other’s knowledge and experiences. Openness for exchange on subject matters was large and triggered curiosity. ATIs realised that advancing together would bring a larger benefit to their individual capacity to deliver competent graduates.

The concept of COLAs has potential for application in other multiple collaborative and multiple objective projects, to facilitate joint learning and action. In conclusion, the COLAs were powerful learning instruments in the transformation process of Colleges of Agriculture into Agricultural Training Institutions.

1.3 Structure of the book

This book is structured in line with the focus of the different COLAs that were created based on the two pillars of the College Revitalisation Plan which the project focussed on. Two COLAs focussed on curriculum review towards Competency Based Learning (CBL). Chapters 2 and 3 of the book focus on the CBL in Higher Education COLA and the CBL in Further Education and Training COLA respectively. Quality control through the COLA approach is discussed in Chapter 4. Although gender was initially conceptualised as a cross cutting issue in the project document, during project implementation, the gender mainstreaming COLA was established. This COLA forms the basis for discussion in Chapter 5. The Rural Wealth Creation COLA is discussed in Chapter 6 of the book. A unique feature of the TACATI project was the numerous number of partners and project members involved. The important lessons that emerged over the years in the course of project management, which are discussed in Chapter 7, will interest readers involved in management of complex interinstitutional, multidisciplinary projects. This concluding chapter ends with a discussion, drawing on a reflective, post analysis of the project and its various project components.

2 Towards competence based learning in higher education

Lutge, B., Chaminuka, P. and Ceballos-Müller, J.

2.1 Introduction

The speed of change - physically, socially and culturally is accelerating and affecting the role of education in society (Wals & Corcoran, 2012). What do we educate for in a world where things change fast and knowledge becomes quickly obsolete? How do we prepare today's graduate for the world of tomorrow, and more specifically, what are the implications for vocational agricultural education (Wals, Mulder & Eernstman, 2013)?

These questions are receiving a lot of attention. Increasingly a shift can be observed, from traditional transmissive (based on the transfer of static knowledge from a sending teacher to a receiving learner) to emerging transformative (based on the development of more dynamic competencies in real-world settings based on authentic tasks and issues that require knowledge-in-action) forms of education which are now referred to as "competence-based" (Mulder, 2012).

The main reason for a competence-based (CB) education approach is the alignment of training with the needs of a society, a sector, a region, a community or a company. "CB education is intended to give graduates access to the world of work. It also wants to enable them to add value to the economy, and to ensure a good livelihood in terms of self-employment, employment in commercial farms, processing companies, non-governmental organisations (NGOs), governmental agencies, or international donor organisations, or as independent entrepreneurs. The CB movement also serves as a response to education programmes that are obsolete and irrelevant for socio-economic development." (Mulder, 2012). Worth (2014) expressed similar curriculum alignment issues in South African Agricultural Colleges, which has resulted in the need for CB Curricula.

According to Mulder and Gulikers, 2011, 2012; Sturing et al. 2011ab, a competence based approach in Agricultural Vocational Education and a higher educational professional education should be guided by the following principles:

- The competencies, that are the basis for the study programme, are clearly specified and based on a thorough analysis of the responsibilities and tasks of a professional, resulting in a competency profile;
- The analysis involves all stakeholders: education institutions, entrepreneurs, commercial farms, processing companies, non-governmental organisations (NGOs), governmental agencies;
- Competence-development of students is assessed frequently (before, during and after the learning process);
- Learning activities take place in several authentic/real life situations;
- In learning and assessment processes, knowledge, skills and attitudes are integrated. The learner demonstrates the competencies s/he has acquired;
- Self-responsibility and (self)-reflection of students are stimulated;
- Teachers both in school and practice fulfil their role as coach and expert in balance;
- A basis is realized for a lifelong-learning attitude for students.

A CB approach must ensure that Agricultural Vocational Education and higher education programmes are more responsive to the demands of the labour market, it also presents a challenge to the existing

teaching /learning methods and call for a review of these programmes. The “Jinja Consensus” in 2003 (cited in Hawkins, 2012) expressed the need for *“A student-centred approach to learning and discovery (that) will include flexible and practical approaches to problem-solving, effective communication skills and strong linkages to rural communities and the developmental needs of key stakeholders such as women farmers. Through experiential learning methods, educational institutions should focus on facilitating student development rather than transferring knowledge. New student evaluation systems will be necessary to reflect these goals”*.

The Hawkins (2012) review of practice at three African universities, as well as examples from other countries (Muir-Leresche et al, 2004; Maguire, 2012), identified a number of ways in which experiential learning can be encouraged in curriculum development and in teaching practice in Agricultural training which is shared below:

In curriculum development:

- Greater involvement and influence of agribusiness and sector organisations in determining curriculum content;
- Inclusion of core courses on systems concepts and application (innovation/livelihood systems, value chains, etc.);
- Focus on higher level learning outcomes such as applying, evaluating, analysing as they promote deep learning;
- Use of self and peer assessment in addition to teacher assessment;
- Inclusion of personal/social skills development.

In teaching practice:

- Maximisation of small group work, “buzz groups”, discussions and student presentations;
- Inclusion of seminars and guest presentations from “non-academic” resource persons;
- Encouraging students to keep reflective diaries or logs of their learning and learning activities.

In student attachments, through:

- Placement of students within multi-stakeholder contexts - ongoing development projects or agribusinesses – to give opportunities for developing communication skills and learning about organisational issues, as well as technical skills;
- Allocation of credits commensurate with time expended and importance within the overall curricula;
- Encouraging students to develop their own learning objectives, and self -assessment of the achievement of these objectives;
- Maintaining participants’ balance of self, employer (host), peer and teacher assessment.

In a South African context, within the agricultural sector, Agricultural Training Institutes (ATIs) are suitably positioned to effectively implement the above competence based learning approach. The institutions are to offer qualifications and training programmes offered across a range of vocational qualifications ranging from NQF 1-5, within their Further Education and Higher Education bands and NQF 6 and 7 within the Higher Education and Training band.

In South Africa the Cedara College of Agriculture was among the first ones to use the competence based approach to re-design their curriculum and training (Worth 2014). Their experience was central in developing within the TACATI project a curriculum framework of strengthening other ATIs in their capacity to regularly review, develop and offer gender sensitive qualifications in response to labour market demands (TACATI Specific Objective 2). The process through which ATIs could revise and develop an NQF level 06 or higher curriculum based on CB principles and approaches is discussed below. In addition, in a similar fashion, but going in more detail, follows the application of CB principles for NQF level 1-5, focusing on development of a training programme, learning materials (assessment, learner and facilitation guides) and lesson plans.

2.2 COLA on competency based learning in higher education

2.2.1 Context

The TACATI project provided an opportunity for ATIs to enhance their capability to deliver on this mandate and to contribute to the successful implementation of the national Agricultural Education and Training strategy. The project used Communities of Learning and Action (COLA) as its main device to achieve the TACATI project results. For further elaboration on the COLA concept see Chapter one of the book. This was complemented by the support of several likeminded organisations who collaborated to enable the Competence Based Learning (CBL) COLA to achieve its objectives. These included one lead South African ATI, a Dutch partner, and eight other local Agricultural Training Institutes.

The CBL COLA objective was to facilitate the process through which ATIs would revise and develop an NQF Level 06 curriculum based on CBL principles. The expected outputs (deliverables) from the COLA were 1) a new CBL curriculum developed and/or adapted, and 2) staff trained in the jointly developed version of CBL. In addition, demand driven training would be offered in key areas of CBL curriculum design and delivery such as facilitation, assessment and curriculum integration.

This chapter describes the processes followed in developing a CBL curriculum for agricultural vocational training institutes in South Africa, with the view to inform and guide processes elsewhere and to draw out some key lessons for future learning. The Chapter begins with a brief explanation of how the COLA approach was used, followed by an outline of the various steps employed in designing a CBL in the South African context. Then an example of such a CBL curriculum for a three year qualification of a 'farmer' which can be adopted and modified by others is presented. The chapter concludes with a discussion of some key lessons learnt which can guide and inform similar initiatives in the future, whilst also adding to the literature on putting CBL curriculum design into practice.

2.2.2 COLA process

Several activities took place under the CBL COLA, which included workshops, ATI visits and training. In the workshops, participants were guided through the various stages of the CBL curriculum development processes. This included defining competences, job profiling, articulating learning outcomes, levelling, modulation and wheeling, outlined below. In the workshops, participants were guided to analyse the progression in terms of learning outcomes for their modules and this encouraged (vertical integration), and to look at the linkages between the different subjects in the curriculum to minimise repetition and to ensure complementarity between the modules to promote horizontal integration or duplication.

In all the workshops, participants were able to interrogate the type of "product" that they should be producing as ATIs which are farmer or farm managers and the extent to which the content and the mode of delivery was influenced by the expected "final product". A general consensus that emerged from the workshops was that the ATIs should focus on producing a hands-on, practical and competent farmer who is able to plan, organise, control farm resources in a sustainable manner and maximise profits.

With subject matter experts from the different ATIs, the COLA developed a generic curriculum framework that can be utilized by individual ATIs to suit their needs.

2.3 Results

2.3.1 Curriculum design

As a general principle any curriculum that is designed for ATI's should conform to the following five pillars of agricultural sustainability defined by Sumaski and Smyth (1994):

Enhancement of production (including food security);
Viability (including financial & rural wealth creation);
Social acceptance (rural & other development);
Market demand, decreased risk (of production); and
Conservation of natural resources.

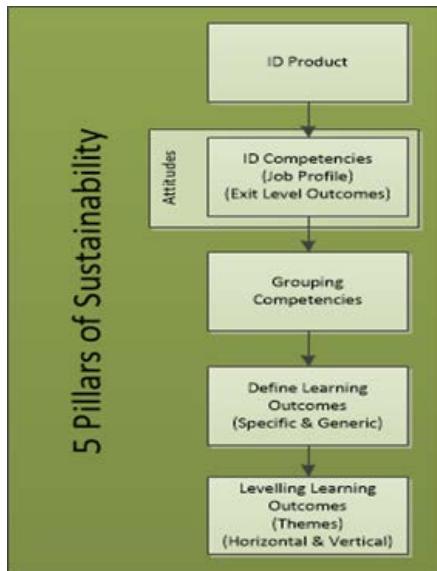


Figure 2.1 Defining competencies

These pillars should be cross cutting in guiding all stages of curriculum design.

An essential aspect of CBL is defining the final product or occupation, and related competencies for which the student is being trained (Mulder, 2012). Figure 2.1 summarises the process of the relationship between the identified product and the learning level outcomes as they are defined at a lower level within the curriculum. The product must be identified through engagement with the labour market and other relevant stakeholders. In the case of the TACATI project, the identified final product was the profile of a 'farmer'. The stakeholders consulted included students, commercial farmers, government departments, commodity organisations and industry. Together with the internal and external stakeholders the profile of a farmer needed to be unpacked. A list of competencies was then compiled based on stakeholder views of what a farmer must be able to do. The question asked was: "What does the farmer need to know and be able to do?"

Using participatory methods of enquiry, various stakeholders were engaged to identify specific and generic competencies that a farmer should have. The Specific Competencies were defined by the 'Job Profile' and are largely content driven, indicating what a graduate must be able to do within the learning line. Generic Competencies are competencies that are not content specific and need to be mastered irrespective of the learning line, e.g., group work, ethics, initiative etc. Grouping competencies then ensures that similar learning areas are grouped together to form a coherent learning path over the three year study period (Learning Lines). Each Learning Line will have several specific competencies. These are then placed in different semesters through, what the COLA termed, levelling.

The South African Qualifications Authority (SAQA) has defined level descriptors (SAQA 2012) using ten categories for each of the ten levels of the National Qualifications Framework (NQF) to ensure coherence in learning at each level. Levelling is based on firstly, the SAQA generated level descriptors (the how?) which ensure varied levels of complexity over the three years and secondly, to allow for a

progression of 'content' learning from year one to year three (the what?). Horizontal integration is incorporated into each semester through assigning themes to each semester. Semester themes, e.g. identifying farm resources, allow the learning lines to focus on similar teaching and learning.

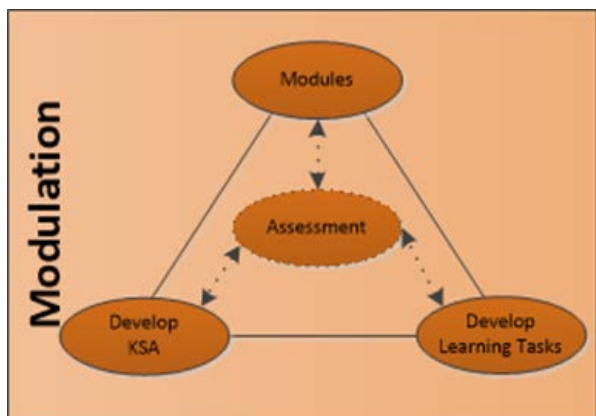


Figure 2.2 Modulation Process

"Modulation" is a term used by the COLA to describe the development of modules for each learning line in the curriculum. Mulder (2012) indicated that the learning and assessment of knowledge, skills and attitudes should be integrated. Learners will have to achieve a level of theoretical knowledge, practical skills and working attitudes through their learning and assessments. Modulation in Figure 2.2 links the competencies with the type of assessments that need to be conducted in order to determine if the competency has been achieved, and the design of learning tasks. Assessments articulate the Knowledge, Skills and Attitudes (KSA) required, and allow for the development of learning tasks and learning modules to ensure learners are able to acquire these KSA (Figure 2.2).

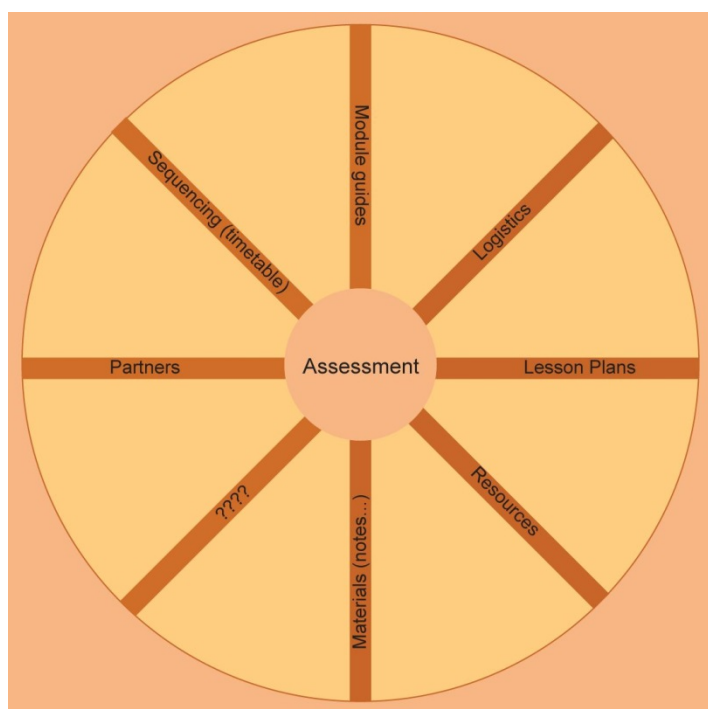


Figure 2.3 Wheeling

'Wheeling', a term introduced by the COLA, is a series of steps whereby all the details of a curriculum and modules are developed. These include, but are not limited to, module guides, the resources & logistics required and lesson plans (Figure 2.3). Assessment of KSA is linked to all these components.

The final curriculum framework is arranged in a matrix. The learning lines are identified with modules in each learning line arranged with progression and complexity increasing from year to year. Each of the six semesters has a number of modules which are linked horizontally through themes (Figure 2.4).















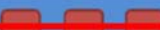







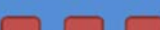

Sem	Learning Line 1	Learning Line 2	Learning Line 3	Learning Line 4
1				
2				
3				
4				
5				
6				

Figure 2.4 Curriculum Matrix

The next section illustrates how this concept was applied in developing a CBL curriculum framework (with the competency of farmer) by the ATIs.

2.3.2 Applying curriculum design for a three-year Diploma in Agriculture for the competency of a farmer

The Diploma in Agriculture delivered by the ATIs is a three year qualification at NQF Level 06 in line with the new Higher Education Qualifications Sub-Framework (HEQSF) (Government Gazette, 2012). Each year is based on 120 credits with each credit equivalent to 10 notional learning hours. The credits in year one are levelled at NQF level 05, those of year two at NQF level 06 with 60 credits in third year being at level 06 and 60 credits at level 07. In terms of the HEQsf the Diploma is vocational in nature.

The ATIs in the CBL COLA agreed to focus on producing a competent farmer. Consequently the job profile or competency of the farmer was defined as: A competent farmer should be able to plan, organise and control resources (farm, natural, human, economic) in a sustainable manner and maximize profit taking into account, applicable social contexts.

The curriculum framework for the profile of a farmer is designed with eight learning lines (Figure 2.5). These learning lines form the basis of a generic curriculum which can be adapted to suit individual ATI needs.

Each learning line has an Exit Level Competency which outlines what a farmer has to be able to do in that particular learning line. As an example the exit level Competency for Agricultural Management is: *Make sound decisions based on economic and management principles to maximize profit:*

Exit level outcomes for agricultural management learning line (example)

Must be able to: Make sound decisions based on economic and management principles to maximize profit

Each of these Exit Level Competencies is made up of a number of Specific Outcomes or Competencies. These would be the outcomes of the different modules within the learning line. Modules could be designed to incorporate one or more of these Specific Competencies. An example of the Specific Competencies using Agricultural Management Learning Line is outlined below:

Exit level Specific outcome for Agricultural Management Learning Line (example)

- Understand and be able to manage the risks in agricultural production
 - Compile financial statements
 - Analyse financial statements
 - Keep production records
 - Compile farm budgets
 - Identify different marketing channels
 - Understand the factors of production
 - Manage human resources
-

In order to address these outcomes basic modules have been identified:

Module progression for Agricultural Management Learning Line

- Risk in Agriculture
 - Entrepreneurship
 - Financial statements
 - Human Resource Management Compile financial statements
 - Budgeting Analyse financial statements
 - Marketing Keep production records
 - Farm Accounting & record keeping
-

The principle behind the sequence of modules is that they increase in complexity from the bottom to the top. In order to achieve the outcome of a higher module the learning from a lower module has to be achieved. The modules are examples of how modules and their content would progress over time. This is what was termed 'Vertical Integration'. Worth (2014) terms this as the learning ladder. The modules are also not necessarily allocated to a particular year or semester. The framework serves as a reference point to validate that the essential KSA a farmer should acquire, are being taught.

2.4 Discussion

The use of the Generic Curriculum Framework should be based on the need of an individual ATI and its competitive advantage. An institution may decide to use only some of the learning lines, combine learning lines, develop new learning lines (based on the same CBL principles) or utilize them as they are. There is an overlap between learning lines and various aspects in one learning line could be covered in another learning line. The learning lines are helpful in identifying what is important for a farmer to be able to do. A crop farmer may not require all the aspects of the Animal Production learning line. Irrigation may also form part of the crop production learning line. As such the curriculum framework is not cast in stone, but is a guide to ensure that the competencies of the farmer are addressed. Agriculture is a complex field of study and it is very seldom that something happens independently from others. As such agriculture should not be learnt in silos. The learning lines must therefore be seen as a guideline to identify common important curriculum issues and not necessarily a way of delivering the curriculum.

Job Pro file	THE FARMER							
	A competent farmer should be able to plan, organise and control resources (farm, natural, human, economic) in a sustainable manner and maximize profit taking into account social contexts.							
Lear ning Line	Animal Production	Crop Production	Agricultural Economics / Business Management	Soil Science	Vegetation (Veld & Pastures)	Engineering (Civil & Mechanical)	Agro Processing	Innovation Capacity
Exit level Competency	Must be able to: Make sound decisions based on latest animal production techniques to maximize profit in a sustainable manner	Must be able to: Make sound decisions based on latest crop production techniques to maximize profit in a sustainable manner	Must be able to: Make sound decisions based on economic principles to maximize profit	Must be able to: Optimally utilize the soil to obtain maximum production without degrading the soil (sustainable use)	Must be able to: Optimally manage veld and pasture in a sustainable manner to maximize profitability	Must be able to: Optimally utilize equipment and infrastructure to maximize productivity	Must be able to: Apply food quality and safety standards in the preservation, processing & packaging of crop and animal products	Must be able to: Communicate, innovate, monitor & evaluate, manage group dynamic, and must be able to operate in a complex rural development dynamic
Specific Competencies	Specific Competencies							
	<ul style="list-style-type: none"> Understand animal breeding Understand nutrition in animals Apply basic veterinary techniques Apply basic animal husbandry techniques Understand animal requirement Formulate production plan using standard recommendations Monitors and evaluates a production plan against production standards Customises production plan to suit specific farm conditions and production objectives 	<ul style="list-style-type: none"> Understand crop selection Understand crop nutrition Apply basic propagation techniques Apply basic crop husbandry techniques Understand crop requirement Formulate production plan using standard recommendations Monitors and evaluates a production plan against production standards Customises production plan to suit specific farm conditions and production objectives 	<ul style="list-style-type: none"> Compile financial statements Analyse financial statements Keep production records Compile farm budgets Identify different marketing channels Understand the factors of production 	<ul style="list-style-type: none"> Understand the natural resource assessments (Soil, Veld, Water, Climate) Understand soil survey Undertake soil sampling Implement sustainable agricultural practices with regards to erosion, tillage practices & practices to maintain soil fertility Understand the soil conservation act Understand basic properties of soil Apply fertilizers 	<ul style="list-style-type: none"> Know and understand factors such as climate Understand veld types Calculate grazing capacity and stocking rates Understand production of cultivated pastures Plan a fodder flow Understand the existing landscape and how to use and manage it Understand regulations regarding rangeland and forage management 	<ul style="list-style-type: none"> Identify, select, calibrate, maintain and operate farm machinery & equipment Select appropriate tillage practices Design simple animal housing, crop storage and other farm structures Understand irrigation planning and installation Do irrigation scheduling and basic maintenance Do basic design of drainage systems Do basic workshop practices 	<ul style="list-style-type: none"> Use appropriate preservation and processing methods Apply food quality in food preservation and processing Apply food safety standards (regulations) in food preservation and processing Know different types of packaging materials Select appropriate packaging materials Store food products according to requirements of different food products 	<ul style="list-style-type: none"> Communicate effectively in a variety of means Be innovative in socio-technical platforms Identify innovations and adapt to their circumstances Monitor, evaluate and analyse their own and external socio-technical variables Manage group dynamics and be able to function in a variety of groups and environments Identify own role in rural development setup and play an active role (collaborative) in development initiatives
Basic Module Progression	Module Topics							
			Risk in Agriculture		Fodder flow planning (unknown environment)			
	Production Planning	Production Planning	Entrepreneurship		Fodder flow planning (known environment)			
	Animal Breeding	Plant Propagation	Financial statements	Soil Resource Assessment	Grazing capacities and stocking rates			Innovations
	Animal Nutrition	Land Preparation	Human Resource Management	Soil Survey & mapping	Cultivated Pastures		Crop & Animal Structures	Development
	Animal Health	Crop Health	Budgeting	Soil Fertility	Rangeland Regulations	Drainage	Maintenance & repairs	Roads
	Basic Genetics	Basic Genetics	Marketing	Soil Degradation	Veld Types and Biomes	Irrigation Scheduling	Machinery & implement operations	Fencing
Basic Calculations & Basic Biology	Basic Anatomy & Physiology	Basic Anatomy & Physiology	Farm Accounting & record keeping	Basic concepts in Soil Science	Soil Genesis	Basic Natural Resources Management	Design & installation	ID & selection
							Basic Construction concepts	

Figure 2.5 Generic Curriculum Framework

The modules in the Generic Curriculum Guide are also a guide. It would be up to each institution to decide which modules would suit their purpose and choose those. Modules can be combined within a learning line, but also across learning lines. An example of this would be a module on Basic Natural Resource Management which could include concepts from Vegetation and Soils learning lines. Another concept of competency based learning emphasised in the COLA and reflected in the framework is horizontal integration. This concept is where lecturers from different modules or learning lines can integrate their learning by combining learning activities. As such, related modules or topics could be delivered at the same time to allow for integrated learning. This again is an institutional decision that needs to be made. Another important issue to be considered in the delivery of the curriculum is the extent to which industry would be involved. This will depend on the college circumstances as well as the preferences of individual lecturers.

Throughout the sessions of the COLA, it became evident that developing a CBL curriculum is just one aspect in a mirage of issues, but ensuring that the competencies are achieved, requires a different type of lecturer. It requires the lecturer to play different roles: that of a facilitator, a trainer, a coach and a networker. Using the International Centre for Applied Research in Agriculture (ICRA)'s hands-on application of integrated and interactive learning, which builds (largely) on the trainees' own experiences and the context in which they are working, a number of two days training sessions were conducted during the project. Staff learned how to design & deliver learning modules based on interactive learning, focusing specifically on working in teams, using Kolb's experiential learning cycle, developing modules that combine knowledge, skills and attitudes using the experiential learning cycle, moving from teaching to facilitating learning and identifying gender entry points in module design and delivery. In the training participants had active discussions, worked on group assignments, engaged in role-play activities and analysed their own on-going learning activities to determine entry points for change.

2.5 Main lessons learnt

The training at the ATIs is not focussed at producing an 'academic' or a 'scientist', but rather a professional whose main competences lie in the capability to successfully run an agricultural enterprise. Some of the ATIs could not agree on the type of 'product' they wanted to produce, as the type of training necessary for a farmer/farm manager is different from that of a graduate who will be employed as an agricultural advisor or extension officer. Uncertainty regarding the type of product will result in learning programmes that don't meet the competencies required for either profession.

The process of introducing a CBL curriculum requires a lot of sensitisation and awareness raising of the benefits. It is a Learning-By-Doing process that requires all stakeholders to work together and be committed to seeing the process right through to its logical end. It is a dynamic process that requires adaptation to the changing environment and priorities. Despite having offered CBL training since 2010, Cedara College as an ATI continually revisits its curriculum. CBL training is not a once off type of training neither is it a static kind of creature, but due to its dynamism, it requires continual coaching and engagement with other peers. If the interaction between the staff from within an ATI and between different ATIs is not structured and facilitated, the ongoing implementation thereof is not likely to yield the desired results. For the future, to enable continued interaction in disciplinary forums within and between the ATIs on CBL, there is a need to incorporate the activities in the work plans and budgets of the ATIs.

Successful implementation of a CBL curriculum requires buy-in from all staff members and support from senior management. In retrospect, the need and efforts to involve senior management in the CBL curriculum were underestimated. Over the four years of the project, not all the staff in the ATIs were exposed to CBL and the various training opportunities. Consequently staff that was involved in the CBL COLA as champions and those trained in the workshops often encountered challenges in trying to implement CBL in the ATIs.

Despite the success of the workshops that were held, in many cases the momentum and excitement gained from the workshop did not yet translate into concrete action by ATI staff. Without committed champions for CBL at each ATI, it will be difficult to sustain the momentum gained. In the ATIs where CBL implementation was introduced, there were not only staff members committed to championing the process, but there was also strong support by management.

2.6 Conclusions

Four years of constant interaction through the CBL COLA has resulted in many ATIs seeing the value of CBL curricula and using it in reviewing and adapting their current curricula. Five ATIs, namely Cedara, Owen Sithole College of Agriculture, Lowveld, Grootfontein and Marapyane developed a CBL curriculum, and have started implementing it. For Cedara, of the 2014 graduates, by April 2015, only two out of the thirty-nine graduates were 'technically' unemployed. Engagement with the labour market to determine the performance of the CBL trained students, however, still needs to be done.

The CBL COLA presented a first opportunity for staff from different ATIs to engage in subject matter groups and discuss subject specific issues. In several workshops, staff from the ATIs hailed this opportunity as beneficial as well as contributing to personal growth and academic development.

Uncertainty at policy level regarding whether CBL is now the defined/recommended approach to training in the ATIs, resulted in some ATIs not committing to revise their curriculum using the CBL approach. Thus, for some ATIs, the whole curriculum does not yet reflect a CBL approach. Going forward, there is need for a clear position regarding CBL in the ATIs at policy level, and at management level to support the process and further invest in the activities necessary to enhance a smooth delivery of a CBL curriculum. The ATIs should consider a budget to form disciplinary fora that allow exchange of ideas and best practice between staff from the same discipline. The steps followed in curriculum design and the resultant Generic Curriculum Framework provides institutions beyond agriculture and at various levels, a mode by which they can update, modify and/or develop new curricula for their specific requirements.

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3 Towards competence based learning in further education

Viljoen, C. and Ulfman, J.

3.1 Introduction

"A trainer conducts training programmes for specific target groups. The content of the training is adjusted to the learning objectives and the characteristics of the target group. He/she uses adequate and varying training methods adjusted to the prevailing learning environment. The trainer strikes a proper balance between instructing and coaching. He or she uses varying and innovative training methods and receives feedback from trainees and colleagues in a positive way" - this is the description of the professional profile of a trainer (PTC+), who trains learners and applies training methodologies based on competence based learning (CBL) principles.

One of the responsibilities of the trainer is to develop curricula based on the learning objectives and the characteristics of the profession/target group. The trainer needs to know the competences the profession/target group need to be successful in their trade and he needs to be able to assess the gap between the desired competences and the available competences.

The existing learning approach at ATIs was not equipping learners to effectively participate in the agricultural sector. It was believed that a CBL approach to curriculum development and training implementation would enhance the offering at agricultural colleges and maximise the benefit to the learner and the sector.

ATI's staff providing vocational skills training to the farming community, also called further education training (FET), were not equipped to develop training programmes that addressed the needs of the labour market (farmers, farm managers and other professions groups). Therefore this COLA programme would focus on providing trainers at ATI's with the required capacity. This influenced the design of the objectives for the COLA to be focused specifically on the trainers of the Institute.

COLA objectives

The overall COLA objective was that the ATI's would be strengthened in their capacity to regularly review, develop, and offer gender sensitive qualifications in response to labour market demands. This related to Specific Objective 2 of the Transformation of Agricultural Colleges to Agricultural Training Institutes (TACATI) project. The specific objectives were:

- Staff are trained on CBL-based curriculum and programme development including recognition of prior learning (RPL);
- Programs are designed on CBL principles and articulated to HE; and
- Programs are implemented according to CBL principles.

3.2 Curriculum development process

3.2.1 Scheduling

A training programme based on principles of competence based learning was developed according to the following schedule:

1. Design the Competence Profile (CP) in consultation with all stakeholders;
2. Design an Integrated Competence Assessment (ICA);
3. Develop a curriculum based on the CP, ICA and the target group;
 - a. Combine closely linked and related topics in modules;
 - b. Develop a learning plan for each module;
 - c. Arrange the modules in a logical sequence;
 - d. Develop a master timetable;
 - e. Develop a module book for each module.
4. Develop the following guides/plans.
 - a. Course book/ facilitator guide;
 - b. Learner guide;
 - c. Assessment guide;
 - d. Lesson plans.

3.2.2 Methodology

The COLA went through the whole process of curriculum development using the following methodology:

Workshops --> Assignments --> College visits --> Self-Evaluation

The workshops comprised of seven sessions, the first session focused on adopting the training approach and subsequent workshops covered steps required for implementation of this learning approach.

Each ATI worked toward developing a curriculum for a specific farming commodity profession:

ATI	Farming commodity
Elsenburg	Grapes and Dairy
Cedara	Broilers
Fort Cox	Pigs
Tsolo	Small stock
Glen	Beef Cattle
Madzivhandila	Fish
Marapyane	Vegetables
OSCA	Sugarcane
Tompi Seleka	Bees

Two aspects were maintained in the approach throughout the process:

1. The COLA would determine and maintain the objectives and learning processes;
2. The COLA would take any decisions, concerning implementation strategies collectively, which would then be suggested to the project management.

3.2.3 Applying the schedule

Design the Competency Profile (CP) in consultation with all stakeholders

The CP is the basis of the learning programme. It shows the responsibilities and task of the professional. It also shows the performance indicators (task ability indicators), which make up the assessment standards. All activities in the learning programme of a cattle beef farmer must be based on and linked to the Competence Profile of the cattle beef farmer. Training programmes can then be adapted to different target groups: subsistence farmers, commercial farmers, farmers with a mixed farm system, farm worker, etc. The training programme may only focus on e.g. Artificial Insemination (AI) but it should still be linked to the CP. If the CP does not mention AI then either the training programme is unnecessary for these learners and should be cancelled or the CP should be adapted due to new developments (the need for a cattle beef farmer to master the technique of AI).

Development of professional profiles may be done by a specialized organization, but it should always include all the stakeholders, especially the farmers.

In Table 3.1 below this is illustrated to show how a CP can be laid out to capture all the aspects critical to designing the learning program, resulting in having outcomes and content for the curriculum.

Table 3.1

Designing competency profile

Responsibility	Tasks	Indicators
1. Business management Description Responsible for the implementation of the financial budget and the strategic plan for the enterprise and assist with gaining access to new markets and maintaining share of the existing	1.1 Ensures enterprise strategic plan executed	1.1.1 Understanding how to interpret strategic plan
		1.1.2 Use historical data to assist with enterprise target planning
		1.1.3 Operational plan designed to fit strategic plan
		1.1.4 Operational plan "transferred" to enterprise foreman for supervision of execution
		1.1.5 Understand business and production succession in practice
	1.2 Administers the enterprise budget	
	1.3 Record keeping and planning	
	1.4 Identifies viable markets	
Outcome/Achievement		Content

Design an Integrated Competence Assessment (ICA)

During the (final) ICA at the end of the training programme the learner demonstrates that he/she is competent to run a farm (section). He/she shows his technical skills, but even more so his/her decision making skills, communication skills, leadership skills, and management skills. The assessor should feel confident to entrust his own farm to the learner. Obviously the final ICA should preferably take place in a farm. Before the learner can take part in the final ICA he must have been given ample time and opportunities to prepare himself for the assessment. Therefore the final assessment together with the CP determines the training programme.

Develop a curriculum based on the CP, ICA and the target group

A curriculum may be divided in several modules of a specific duration. In each module the learner is to achieve a number of skills and/or competences, that are mentioned in the CP. The skills / competences in one module are closely linked. For each module a learning plan is developed. The learning plan describes how the training is going to be conducted: (kind of) integrated learning, support lessons and coaching. To develop an appropriate learning plan the trainer needs technical skills, practical/real life experience, teaching skills, and coaching skills. Moreover, he needs to be innovative as conditions are not always favourable regarding tools and infrastructure. He should demonstrate the ability to:

- Combine closely linked and related topics in modules: The modules are organized according to internal or external conditions, e.g. availability of certain tools and equipment or growing season;

- b. Develop a learning plan for each module: On the basis of the arrangement of the modules and the learning plans a master timetable is constructed;
 - c. Arrange the modules in a logical sequence;
 - d. Develop a master timetable;
 - e. Develop a module outline for each module:
1. For each module a module outline is developed. The module outline describes the professional situation where and when the learner may need the competences dealt with in this module. It clearly links the content of the module to the CP. It also indicates entry qualifications, relation with Unit Standards, assessments, workload, timetable, activities, specific objectives, and sources of information;
 2. The module outline may be extended with information for the trainer, e.g. required preparation before the start of the module (readers, other trainers to be involved, guiding participants, reading and assessing reports and tests), required preparation each lesson (e.g. worksheets, animals, transport, etc.), timetable.

Develop the following guides/plans

Similar guides must be developed keeping in mind the CBL principles.:

- a. Course book/ facilitator guide;
- b. Learner guide;
- c. Assessment guide;
- d. Lesson plans.

For each lesson a detailed lesson plan should be developed. A lesson plan is a guide for trainers and learners. Both, trainer and learner, can prepare himself for the lesson in order to make it more efficient and effective. The lesson plan describes in short all the activities that will take place, the role of the trainer and the role of the learner.

3.2.4 Implementing the methodology

Resources for workshops

At the workshops the following templates were provided for guidance for implementing CBL curriculum development (see Table 3.2):

Table 3.2

Templates for developing CBL curricula

Curriculum development	Development of learning material
Professional profile	Module Guide
Integrated Competency Assessment	Learner Guide (content overview)
Learning Arrangement	Facilitator/Trainer Guide (content overview)
Lesson Plan	

All of the above template/resources are available at the following link: <http://tacati.webs.com/downloads>

Assignments

In between workshops participants worked on assignments and reported the results during the next workshop. Participants worked in small groups combining different ATI's. At the end of each workshop process and progress were evaluated and the way forward discussed.

College Visits

The purpose of the visits: to learn about the training environment, training tools, training methodology, constraints and successes of other ATI's (FET).

Self-evaluation

After having discussed the principles of CBL the COLA started with a self-evaluation exercise of some of the courses presently run at the ATI's: are our courses CBL-based and to what extent. A Matrix for Competence Based Vocational Education (Wesselink R, Elsen E.van den, Biemans H, Mulder M, 2005) was used for this exercise (<http://tacati.webs.com/downloads>)

3.2.5 Gender sensitivity in an agricultural education and training environment

A workshop was conducted in which issues around gender and the approach to training was covered. Unfortunately a concrete action plan was not developed to effectively address this issue, but a robust discussion was facilitated in which participants were able to conscientise themselves and others on this issue and its implications.

3.3 Results and analysis

Professional profiles, ICA and learning plans developed according to plan. Further development of curricula started by all ATI's. One curriculum almost completed: Beef cattle production. All work developed is collected and available for internal use¹.

CBL requires skills and competencies the 'traditional' trainer/teacher was never taught/never acquired. The trainer needs to be innovative, needs to have a lot of practical experience to be able to develop, teach and coach integrated programmes/lessons.

Through this process, with ATI's, it was noted that there were certainly links between the existing training practice and the CBL-approach.

All participants of the COLA initiative acknowledged the implementation of CBL-principles in FET-training programmes as an appropriate training methodology to bridge the gap between theory and practice, between trainers and learners, between College and farmers (and other stakeholders).

The participants saw the sort of advantages that CBL could offer to learners, trainers and Institutes, but amongst these foremost for the learners. Participants, however, agreed that introduction of CBL needs above all a change of mind-set from the trainers: from expert to coach, from trainer centred to learner centred, from time bound to learner-paced training.

3.4 Conclusions, observations and recommendations

3.4.1 Conclusions

Further Education is a unique environment within the operations of ATI's and the significance of its impact is possibly being undervalued by most institutions. The impact is made potent by the relevance and flexibility of the curriculum offering as it grows and adapts to market demands and trends.

CBL is an approach to learning that invites the outside world into the ATI. It requires the teacher to play different roles: trainer, coach, networker. It requires the teacher to have practical knowledge and

¹ These outputs can be accessed at the following link: <http://tacati.webs.com/downloads>

experience not only in teaching, which is obvious, but also in the profession(s) he/she is dealing with. Once the ATI has accepted CBL as the training methodology the management should create a conducive environment for trainers and learners where this can flourish.

3.4.2 Observations and lessons learnt

Partnership and involvement of AgriSETA

AgriSETA began a process with the Quality Council for Trades and Occupations (QCTO) in the generation of vocational training programs. Had they allowed for greater participation with the working group they could have guided the QCTO process by allowing for a CBL type approach and involving the Agricultural Colleges involvement in the generation of profiles and certification of their training sites for various vocational qualifications. This is a partially missed opportunity which colleges now need to align with, instead of shaping the direction.

Looking forward, colleges need to collaborate with AgriSETA to allow developed CBL curricula to be developed further and accredited.

Project split timing

It may have been beneficial to not have a higher education (HE) and further education training (FET) split in terms of training, as there are now varied approaches which exist within the same institution, as FET and HE have not been given the same CBL exposure in terms of approach and training.

Adoption into Colleges

In the present operational environment, it may be best to have colleges modify job descriptions at institutions as a result of this process to ensure that curricula are reviewed and implemented in accordance with CBL principles to allow continuity.

Total number of ATI's at inception

Having two individuals from within a component from most institutions was useful, but offered limited institutional support, in that participants conveyed a sense that after returning to the institution, they were isolated. This was based on the understanding that colleges had had previous exposure, which was not always the case.

In order to better facilitate Communities of Learning and Action initiatives a two stage approach may have been more effective. This being fewer colleges being trained in their entirety (e.g. entire FE components) and once they have well understood the concepts, maybe regionally, they would be local resources which could be mobilized to further train and empower other institutions, throughout the life of the project and beyond the time-frames of the project.

Credits, Accreditation, CBL and Unit standards

Learning units can be incorporated into a newly developed CBL Curriculum, but a challenge exists when you are tailoring a curriculum to the specific needs of the learner, as you cannot assess/accredit half the content of a Unit, it has to be taught and assessed in its entirety to be credited to the learner.

3.4.3 Recommendations/reflections

1. Make a Competence Profile for a trainer who should be able to develop and implement training programmes based on principles of Competence Based Learning;
2. The introduction of a new training approach and strategy would require a number of stages:

Stage 1: Train everyone in the new concept, invite and/or mandate participation (if necessary). This way you would know that everyone knows and can make an informed decision;

Stage 2: Request volunteers for participation, after they have fully understood the concept and process;

Stage 3: After training those who volunteered, select the ones who "went the furthest" and were most active at adoption;

Stage 4: Implement with the active adopters, and support their transformation;

Stage 5: Return with the active adopters and their results to stage 1. Now there isn't just a small group and you have learnt implementation within the context of the adopters and are better equipped to expand the concept density and its "propagation".

3. Number of ATI's involved when introducing a new training concept;

Start with the ATI's within one Province, then expand further;

Acknowledge the cost of transport and accommodation which is required to facilitate interaction.

4. Sustainability.

Implementation of the new training approach requires the commitment of ATI's management. The Institute should provide an enabling environment for Competence Based Learning, e.g. infrastructure, time for staff to adapt to new programmes and/or develop new ones;

Modification of job descriptions (trainers) reflecting the trainer must be competent in the development and implementation of CBL-based training programmes, so that the trainer is adequately empowered in the development and implementation of CBL-based training programmes.

References

Matrix voor competentiegericht beroepsonderwijs, Wesselink R, Elsen E.van den, Biemans H, Mulder M, Department of Education and Competence Studies, Wageningen University, 2005

4 Steering quality assurance and promotion within ATI's

Lalendle, L.L., Mazibuko, S., Lesoli, M. and Bloten, A.

4.1 Introduction

This chapter outlines the context of quality assurance and shares experiences and insights gained through the community of practice and learning in action model amongst Agricultural Training Institutes (ATIs). Furthermore, the chapter provides brief explanations on tools and documents developed and shared by the ATIs and finally, highlights the level of success attained and challenges encountered in the development of quality assurance processes, and understanding or awareness thereof within the ATIs educational landscape.

4.1.1 Background

Quality Assurance, promotion and enhancement has emerged in the education sectors as a critical phenomenon in response to the masification of education in both developed and developing countries. Since the dawn of democracy, agricultural colleges of South Africa have been offering education and training to students with varying quality for years. In 1994, the citizens of the country voted to end an unequal and discriminatory provision of education and training to the citizens of the republic of South Africa. As part of reconstruction and development of the Agricultural Education Sector, the post-apartheid government set up norms and standards in Agricultural Education and Training to address the varying quality provision guidelines across the agricultural sector. This is geared at creating a better, larger and diversified pool of agricultural human resources to serve at the national and provincial levels of government including non-governmental organisations. However, the vision and mandate of agricultural colleges has been challenged due to unclear reporting structures especially when it came to quality assurance and promotion. The majority of these colleges have been funded by and, therefore, report to the provincial government. Nevertheless, the colleges have been monitored by Council on Higher Education (CHE) through its Higher Education Quality Committee (HEQC) for quality assurance purposes. Furthermore, since the colleges offer the agricultural occupational training, they have been offering the programmes approved by Agricultural Sector Education Training Authority (AgriSETA).

ATIs have for long been working hard to monitor and assure the quality of education offered. Thus, as part of traditional approaches to ensure "appropriate" standards, they relied heavily on peer evaluations in respect to courses (Smout and Stephenson, 2001) and training offered within the higher education band and the further education bands. The external review of examination papers for exit modules have been the main means of assuring quality and standard of Agricultural Education and Training in South Africa.

Critical questions in respect to quality of Education and Training offered by ATI's have been asked in different platforms and different contexts. These pertinent questions focussed on whether the ATI's are providing the relevant or appropriate agricultural education and training (AET) that answers the requirements of the changing agricultural landscape of South Africa. Do ATI's have appropriate standards for Agricultural Education and training to assure high quality agricultural education programs that focus on the development of essential skills for students informed by local, provincial and national agenda? Do they have enough technical and administrative capacity to execute their mandate? Do they have reliable yardsticks or mechanisms for measuring the required standards? In response to these pertinent questions the Department of Agriculture, Forestry and Fisheries (DAFF) attempts to address these challenges through its Agricultural Education and Training strategy (AET Strategy 2005). It argues for "accessible, responsive, quality education and training for agricultural

and rural development". Its vision partly informs the college revitalisation plan and the transformation of ATI's in the country. This vision is further substantiated through three distinct goals viz (i) Develop and maintain an effective and well-coordinated AET that is integrated at all levels and responds appropriately to South African Agriculture; (ii) Enhance equitable access and meaningful participation in AET for all South Africans; and (iii) Ensure the application of an effective quality assurance model of AET at all levels.

4.1.2 Problem statement

Agricultural colleges have for a long time been at the centre in ensuring food security, sustainable development and rural wealth creation. Recent reviews of Agricultural Education and Training in South Africa revealed the long held belief that while these institutions have been providing education and training for decades, internal quality assurance and promotion systems have been suspect for years. The Council on Higher Education (CHE) initiated an independent assessment drive of the status quo which confirmed existing challenges in respect to lack of capacity in personnel in assuring quality in their practices and systems; and weak governance structures for academic programmes. Consequently, accreditation of their programmes with the CHE, thus could be attributed to non-compliance with the requisite regulators accreditation criteria.

4.1.3 Justification/significance

Quality Assurance of Educational and Training provision is critical in any education system as students, families, employers and the government want the assurance that students will get "good quality" education (Zineldin and Vasicheva, 2012). Quality Education and Training in the Agricultural Education and Training sector would encompass a consistent delivery of high quality programs that are relevant to the need of the country. It further entails a rigorous instruction, with clear outcomes that are continuously evaluated by peers and institutions are required to effect improvements to guarantee that access with success is provided to all participants, irrespective of colour or religion.

4.1.4 Objectives

The objectives of the Quality Assurance Community of Learning and action were to:

1. Develop appropriate quality assurance mechanisms for ATI's;
2. Develop common understanding of quality assurance procedures in higher education (HE) and further education training (FET) sector;
3. Build a quality assurance culture within the ATI sector through collaboration and peer assessment;
4. Ensure that ATI programmes got re-accredited and others existing ones continued to maintain their accreditation status.

4.2 Understandings of quality assurance in higher and further education

In South Africa, especially in the agricultural training space, there are two external bodies which are the Agricultural Sector Education Training Authority (Agri-SETA) and the Council on Higher Education (CHE). The two have emerged as the two main quality assurance authorities within the sector. They manage quality in the FET and the HE bands respectively.

In some quarters, quality assurance and promotion is often seen as an imposition of industry notions on the educational context. According to the CHE founding document of the Higher Education Quality Committee (HEQC, 2001), the institutionalization of quality assurance is firmly on the agenda of higher education in a number of developed and developing countries around the world. It is from this backdrop that South Africa has established rigorous quality assurance systems to manage quality and standard in all its educational and training sectors. Critics argue that the policies of quality assurance in HE have neo-liberal grounding which work against what educational institutions are set to do. Olsen and Peters (2007) bring this challenge closer home when they argue that the traditional professional

culture of open intellectual enquiry and debate has been replaced with a institutional stress on performativity, as evidenced by the emergence of an emphasis on measured outputs: on strategic planning, performance indicators, quality assurance measures and academic audits. It is no secret that South Africa has embraced Quality Assurance as one of the steering mechanisms for higher education. In 2014, the Council on higher Education championed quality enhancement to build on the first cycle of quality assurance in Higher Education. The new system focused on teaching and learning issues which are geared at strengthening all processes that feed into quality teaching and learning as identified by the institutional audits which provided a good baseline data on quality at Higher Education Institutions.

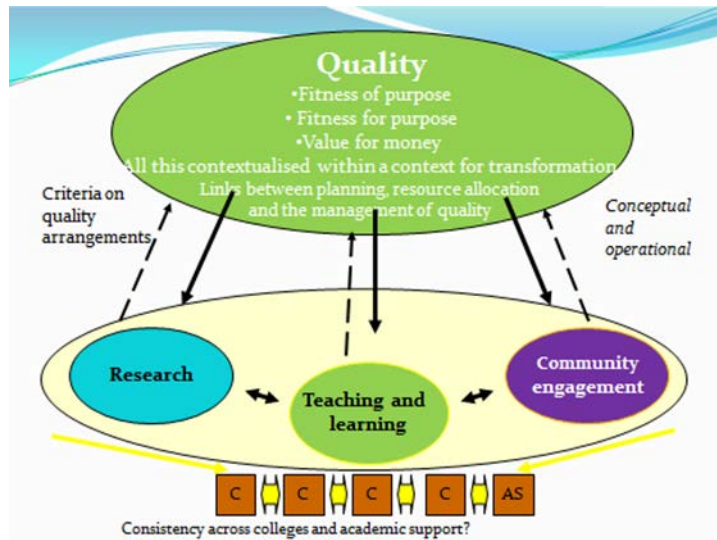


Figure 4.1 Salient features in defining Quality in Higher Education. Source: Council on Higher Education

Understanding quality in higher and further education included dealing with concepts and different understanding of quality as it is applied to these sectors. The QA COLA adapted a universally recognised definition of quality to centre its work on reviews and the development of specific documents such as the balanced quality score card and its policies (Figure 4.1). In the ensuing section, the authors introduce the operational definition of quality that guided the COLA's work. Quality in the context of ATI's incorporated these salient understandings:

- Fitness of purpose: focus on being true to its identity and being true to what it was set to do;
- Fitness for purpose: this entails responsiveness to global, national and local challenges;
- Value for Money: includes sensitivity to discharging services in an efficient and effective manner;
- Transformation: this entails the ability to address issues that are capable of changing lives of people for the better by being sensitive to equity of educational experience of student and staff.

This definition assumes that Higher Education institutions will be reviewed against their mission, identity and vision. Assessment would also look at issues of relevance of programmes and activities in respect to the immediate and extended environment and stake-holders. The provision of educational services also assumes that all is done in an efficient and an effective manner to assure sponsors that there is value for money. All this understanding is predicated on the notion of transformation as education must contribute to both individual and social transformation. It acknowledges focus on knowledge production, teaching, learning and skills transfer. These activities should ensure communities are engaged and benefit as equal partners in knowledge production and sharing of expertise. It argues that there is a need for players to understand quality, both at a conceptual and operational level including relationships between all facets of the educational project and strive for consistency of practices across various academic and support units within the institution.

4.3 COLA process

As part of the Transformation of Agricultural Colleges into Agricultural Training Institutes (TACATI) project the community of learning and action (COLA) in quality assurance (QA) was established. The COLA model provided a bottom up approach in dealing with quality challenges within the ATI sector, created a collaborative environment for ATIs to share good practices, helped to identify gaps within the ATI practices, provided opportunities for training, provided a common platform for Senior Administrators and academics to conform to quality issues as a united force, highlighted existing disparities amongst colleges and sensitised each other the need to provide equitable service across the country.

The Quality Assurance COLA (QA COLA) inner working group was collaborative in outlook and entailed sharing of ideas so as to inform training and practice. The COLA became one of the vehicles geared at the Transformation of Agricultural Colleges into Agricultural Training Institutes. The COLA operated within a qualitative paradigm, where training and reflection on application of quality process and innovations were encouraged and monitored. The COLA provided a participative and collaborative environment where participants were provided with opportunities to reflect on their college practices and their understanding of quality assurance. It provided opportunities for continuous and collaborative sessions that provided ATIs with a platform to share experiences and benchmark on the progress they were making in application of lessons from the COLA's.

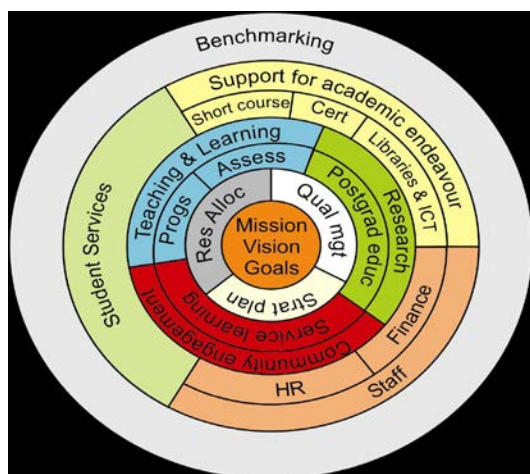


Figure 4.2 Quality focus areas. Source: Council on Higher Education, 2008

Method

Over a period of three years the Quality Assurance COLA gained prominence as one of the key components in facilitating a deeper understanding of the Quality Assurance imperative amongst Colleges of Agriculture as they transformed into Agricultural Training Institutes. There were eleven participating ATI's who attended a series of five workshops of 25-30 participants at a time. The sessions picked specialised topics that dealt with programmes, assurance of quality systems, daily duties of quality offices or champions, quality score card, development of a quality manual and quality policy. In essence the scope of engagement focused on the areas presented in Figure 4.2.

The COLAs' focus areas assisted participants to effectively engage with critical drivers of a Quality Assurance Culture and the creation of communities of practice amongst the ATIs. The workshops provided yet another opportunity for the facilitators to engage with members of staff from a wide range of service providers in the Agricultural sector in South Africa.

4.4 Main results

In this section of the chapter we discuss the Quality Assurance COLA's main deliverables, reported as outcomes from the six workshops facilitated by different quality experts from South Africa and the Netherlands. In the ensuing discussion, new skills, competencies learnt and opportunities for networking and sharing of information are highlighted, based on the different activities.

4.4.1 Approach

The Quality Assurance COLA workshops covered various topics in a participatory approach in order to enable participants to be conversant with a variety of issues that needed to be engaged with in the college revitalisation process. There were a number of presentations and the majority of them were done using electronic presentations such as PowerPoint programme or similar programmes. Each day there were reflective sessions providing opportunities for the participants to share their unique experience from their context or to reflect on the concepts, strategies and practices that could work in their environments. In each workshop concrete 'products' were prepared and the participants had to discuss and get feedback from their respective ATIs for further improvement of these products.

The COLA reported on the following key outcomes as part of its work and deliverables. The first workshop was geared at covering issues of governance, roles of a quality officer and programme accreditation, made few pronouncements on the state of ATIs drawing from the Council on Higher Education's report on the 2013 audit of colleges. The workshop highlighted key challenges in the governance structures of ATIs and emphasised the need to relook or evaluate at the efficacy of existing structures and their roles in facilitating proper governance. The COLA coordinator, local expert and Dutch expert visited ATIs to engage on best practices and to assess and support them in revamping their structures of academic governance and overall administration in the areas that covered teaching and learning within the ATIs. The subsequent workshops focussed on training the participants on programme development, accreditation requirements for new programmes and existing ones. Key concepts and considerations in these processes were explored and hands-on experience was shared with the participants. The focus was on programmes within the Higher Education band. In various QA workshops, members of other COLAs were invited to share their points of view on specific subjects such as: governance, CBL, Management Information System and Gender. The inputs included the following:

- Policy development for agricultural education and training as a system and at ATI level. These policies should give the QA a framework;
- Eight principles of competency based learning (CBL) as used in the design and implementation of CBL have been integrated into QA tools as indicators for measuring the level of CBL implementation in the Colleges and their programmes;
- Design and implementation of a Gender Audit. The most important indicators have been integrated into the quality assurance scorecard;
- Conceptualization and design of a Management Information System (MIS), creating amongst others the basis for creating benchmarks for quality at national and international level. The MIS includes a module on student and graduate tracking and will be the principal source of information and data for quality assurance monitoring and auditing.

As part of the approach, the Deming cycle for Learning and Improvement (PDCA cycle), gave guidance in the preparation and the implementation of the workshops and visits to the ATIs, identifying in which stage the ATI was in each of the quality assurance aspects, applying: Plan, Do, Check and Act.

In most of the workshops an official from DAFF participated to give the necessary input and feedback from the national authorities.

4.4.2 ATI peer audit

Audit training

Building on existing experiences, the COLA focused on training COLA members to be quality auditors. The objective of this training exercise was to equip the participants with a deeper understanding of the

audit methodology as designed by the South African Council on Higher Education. Participants acquired valuable knowledge on the criteria used in audits, as well as critical ethical and behavioural considerations for auditors. The training also covered the importance of planning and strategising for an audit and the sort of key competencies that participants were expected to acquire during the training such as:

- The ability to conduct an audit of an institution and programme review as a peer;
- Respect for diversity on how Quality Assurance is managed at different institutions;
- Ethical conduct for peer reviewers or auditors;
- Planning for a self-evaluation portfolio;
- Interviewing techniques and establishing lines of enquiry;
- Triangulation of evidence;
- Interpretation of statistical data;
- Writing of an audit report or programme review report.

Audit outcomes and processes

Emanating from the quality assurance audit training, a group of auditors were identified and appointed to conduct audits at selected ATI's. The ATI's were asked to prepare self-evaluation portfolios based on the Quality Balance Score card agreed upon by the Quality COLA. This tool was in line with the CHE and AgriSETA institutional accreditation framework. The audit approach assesses the college compliance standards in all areas from the governance, programme coordination, design and delivery, Quality Assurance SOPs, Staffing, Student support and follow-up system and Infrastructure. The panels completed the report and other ATIs would be audited within a three year period.

4.4.3 Quality assurance manual

The Quality Assurance manual was one of the deliverables of this COLA. In the workshops we worked on the need to ensure that the Manual included the necessary policies, guidelines and procedures that the ATI could use to manage the quality of its programmes and provisioning of services. The development of a generic quality manual served as a basis or yardstick that each college could adapt and customise to its needs. The Manual therefore served as a quality reference tool or mechanism for all new and existing staff on how quality is managed at the ATI. Participants were informed that the quality Manual should be a living document and could be updated whenever a need arises. This was one of the key deliverables of the quality COLA and participants were optimistic that this product would facilitate the transition or evolution of colleges into full-fledged and functional Agricultural Training Institutes.

4.4.4 Quality assurance balance score card

One of the major achievements of the QA COLA, as considered by its participants, was the development of the Quality Assurance Balanced Score Card. This activity required a lot of energy and patience as consultation with all key stakeholder was key to its success. In three workshop sessions the balanced score card was developed and inputs were made to refine it. A further accolade for this COLA in respect to the balance score card was to use it as part of the self-review process in all ATIs that were part of the Quality COLA exercise or engagement. This empowered participants to understand the principles of self-evaluation guided by this score card and the need to have supporting evidence for their claims. The balanced score card covers areas of governance, teaching and learning, community engagement and diverse ways in which the colleges benchmark their practices to ensure continuous improvements in all spheres of their operations. The score card was also subject to a process where the joint Gender and Quality COLA members incorporated aspects that make it responsive to gender matters within the college system.

4.4.5 Quality assurance policy

The Quality Policy was adapted mainly from the existing Quality Policy of the University of KwaZulu-Natal. It also mirrored similar policies from the higher education sector in Australia and Britain. This benchmarking exercise was to ensure that a credible product was produced that would facilitate the transformation of Agricultural Colleges to Agricultural Training Institutes. It covers policy directives

that ensure that quality is everyone's business at the college; it gives structure to the mandate to monitor certain processes that are within the realm of competence of quality assurance such as teaching and learning, research and community engagement. The Quality Policy covers both the Further Education and the Higher Education band practices. It regulates aspects of examinations, moderation and Quality Assurance of research endeavours at the colleges. The development of the QA policy was a very interesting and hands-on process where participants researched various policies and thereafter, as a collective, developed a template for the generic QA Policy for ATIs.

4.4.6 Programme review and development

The COLA focussed on imparting skills and knowledge in programme development and also to provide guidance on how participants can evaluate existing programmes to ensure that peers continue to have confidence in their ability to meet the agreed upon outcomes. In two workshops, participants were given opportunities to select similar programmes in agriculture to try out their skills in evaluating programmes looking at issues of design, student recruitment, admission and selection, staffing, teaching and learning strategy, Student assessment, infrastructure, administrative services and library resources. These activities provided a good basis for the participants to understand the critical issue when it came to programme development and also programme review. The COLA contributed to a better appreciation of resources required to ensure that programmes stay accredited and also those that are required by the Quality Council to have an accredited programme.

4.4.7 Self-evaluation

Participants in the QA COLA were exposed to the importance of a self-evaluation portfolio in respect to programme review and also in institutional audits. In the ensuing engagements with participants, it became clear that a self-evaluation report is an honest and reliable appraisal tool of the quality of learning and teaching processes and the management systems in respect to a programme or at an institutional level in each College. It forced colleagues to reflect on what their current state was when it comes to quality assurance and also offered them opportunities to identify areas where there could be concerted efforts to improve quality measures. The ATIs had their unique ways of identifying these challenges and at times they were known as quality gaps. Some of them would go to establish a register of such challenges and would form part of their quality improvement plan. In some of them a quality improvement plan would be drawn from the list of recommendations emanating from the external audit panel and all the challenges would be worked on over a period varying from three months to three years to sort out all the identified challenges from the self-evaluation process and also by peers through the diverse peer review process. The self-evaluation portfolio has to include supporting documents which serve as evidence for existence of policies, strategies and processes to manage quality. Reflections from the two workshops that directly dealt with the self-evaluation process indicated that this was one of the areas where the greatest benefits were immediately visible. The QA COLA designed a Quality Score Card as an instrument to be used when participants were preparing for institutional audits. The exercise reinforced the need for evidence for the claims that participants were making in respect to various areas and the efficacy of their quality assurance systems.

4.5 Reflection and challenges

It is important to note that the only time you should look back is to see how far we have come. There is common understanding of the progress made which is worth reflecting as we believe that the experiences of the COLA changed how we think about quality assurance and excellence.

4.5.1 College working on quality assurance issues

Most of the ATIs had already started Quality Assurance processes and practices in compliance with the Council on Higher Education directive. Nevertheless, establishment of the Quality Assurance vehicle in the form of a COLA was key in the promotion of sharing expertise and experiences in Quality

Assurance. Thus, since the beginning of the COLA in 2013, about 80% of the ATI's consistently participated in all COLA activities.

This COLA contributed in the conceptual understanding of quality processes and indicators, a concept which was not readily understood within the agricultural education and training landscape. Apart from regular COLA activities, as outlined in the previous sections, a very strong network and collaboration platforms were established between the institutes on issues of Quality Assurance and promotion. The networks created platforms where ATI's cross shared the experiences and challenges with regard to quality assurance and such interactions went beyond the COLA activities where staff members tasked with quality issues and principals initiated interactions between the ATI's.

4.5.2 Support visits to colleges

The QA COLA nominated a team of experts from South African and Dutch partners to support the Colleges in their transformation into Agricultural Training Institutes. All the ATIs were visited by members of the team of experts to support them in ensuring that they were responding to the initiatives of the QA COLA to revitalise these learning institutions. The teams covered aspects of Quality Assurance, starting with the appointment of quality assurance personnel and /or assignment of available staff members to oversee quality issues, existence of the quality assurance systems and processes, issues of governance, staffing, teaching and learning, research, community engagement, student participation, corporate services and existing infrastructure. Discussions with staff members and principals on quality issues were held with the task team and it was discovered that a lot of colleges had engaged with the quality assurance processes.

4.5.3 Collaborations and impacts

The concept of "pride and joy" in work – and its impact on quality- is one of the foundations of the philosophy of W. Edwards Deming. Deming, along with Joseph M. Juran and Philip B. Crosby (American Society for Quality (ASQ), Glossary: 2005), are regarded as true "management gurus" in the quality revolution. Their insights on measuring, managing, and improving quality have had profound impacts on entire institutions around the world. Therefore, in order to improve the impact of the COLA, there were some multiple collaborations between the ATIs within the provinces and across the country. Although documents and practices were not identified as quality assurance practices, several ATI's had different quality management documents and practices of varying standards of accuracy. The establishment of the COLA platform led to an improvement on quality assurance practices and systems through sharing of the documents. Although the "good" and/or "best" practices are used relatively, good workable practices were shared across the colleges and led to a relative improvement in processes of improving excellence of agricultural education and training.

4.5.4 Challenges for quality assurance

By the end of the project, there were generally no direct observed challenges for Quality Assurance in the ATIs except that there was very low support from the authorities and staff to create the required support for the ATIs. Quality Assurance was still by far and largely considered to be centred on one person who was assigned the responsibility instead of it being owned by everyone. In general, the aspects of quality were further limited to the academic programmes and accreditation processes leaving out the support activities and staff in quality assurance aspects. Looking ahead, it's relevant to mention that continuation of quality assurance practices will help in bringing light to general quality issues and, in turn, the performance within the ATIs will improve.

4.6 Concluding remarks and way forward

The Quality COLA maintained from the start to the end a very dynamic process and managed to keep its members interested in different aspects of Quality Assurance. It also interacted with other COLAs to share the progress they were making in their specific areas of operation. All participating ATIs embraced the basic tenets of the quality COLA, believing that quality is everybody's business and it is

a peer driven process. The reflections from participants also gave the facilitators and coordinators a sense of achievement as participants applauded the manner the workshops were facilitated and the immense benefits they were deriving from the group interactions. It was indeed a community of practitioners where ideas were translated into action that improved quality mechanism at all participating colleges. The workshops turned most of the participants into quality champions in their colleges and rich experiences, insights and data shared will remain invaluable educational experiences for the agricultural sector in South Africa. Key achievements are:

1. Development of a generic Quality Assurance Policy for the ATIs;
2. Development of a Quality Assurance Balanced Score Card;
3. Development of a Quality Assurance Manual for the ATIs;
4. Integration of gender issues in the Score Card and the Quality Assurance policy;
5. Training and Certification of quality champions as Quality auditors;
6. Exposure of staff to the peer review process in programme reviews and institutional audits;
7. Training of staff on programme development and accreditation requirements;
8. Creation of groups of peers who will work together to review programmes and institutions within the sector;
9. Sharing of the duties and responsibilities of a quality officer and quality champions.

As part of the way forward, there are three pertinent resolutions that the COLA coordinator and senior leadership of the ATIs need to take forward on behalf of the participants which are:

1. Commitment from the facilitators and coordinator of the COLA to ensure that with or without funding the sharing of experiences and limited training opportunities continue with at least two meetings per annum to build on the work of the QA COLA;
2. The Association of Principals of Agricultural Colleges (APAC) adopts the QA COLA as a sub-structure that will advise them on all quality -related matters within the colleges. This body of ATI Principal would work closely with other members of the COLA to take all quality-related matters forward;
3. The use of the MIS in the Colleges need to be promoted and sharing of results on the different indicators, benchmarking with and between the ATIs and at international level with other education and training institutes needs to be enhanced.

With the APAC members we need to share the following statement: "Sometimes we stare so long on a door that is closing and we see too late the one that is opened". Quote by Alexander Graham Bell with the aim to define concrete priorities for further quality assurance implementation.

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5 Addressing gender status within Agricultural Training Institutes

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5.1 Introduction

Attention to gender issues has been a priority area in the political and social arena in South Africa and this focus has been complemented by the work of the partner organisations in the TACATI project. In sensitising the communities in the Agricultural Training Colleges interventions were informed by a series of policies and legislation promulgated in the South African Government which aimed at mainstreaming gender in the Public Service as well as in society in general. These include the White Paper on Reconstruction and Development, 1994; White Paper on the transformation of Public Service, 1995; White Paper on Affirmative Action in the Public Service, 1998; and the Employment Equity Act of 1998. The current policy framework has ensured, at a minimum, the establishment of employment equity targets as the indicator for gender mainstreaming.

Within the agricultural sector, the Policy Framework for Women Empowerment in Agriculture, Forestry and Fisheries is recognised as one of the key legislations in addressing gender participation in the sector and also providing the backbone for transformation. Gender equality and the empowerment of women in South Africa through gender mainstreaming is not only about attainment of equal participation of men and women in the agricultural economy. In particular, it's about ensuring that all the rights entrenched in the Bill of Rights in the Constitution become a reality for all women and men in South Africa by:

1. Addressing gender-based oppression, patriarchy, sexism, racism, ageism structural oppression, as well as traditional cultural and religious beliefs that discriminate against women; and
2. Intensifying efforts to ensure equal enjoyment of human rights of and fundamental freedoms for all women and girls who face multiple barriers to their empowerment and advancement through special programmes and additional resources.

It is troubling to note that according to the 2006 public commission report on gender mainstreaming in the public service (Public Service Commission, 2006), there is lack of understanding of the notion of gender and mainstreaming for gender equality. The report states that this limitation results in the inability of some public managers to move from the cognitive understanding of organisational vision, policy and strategy to the implementation thereof. The report further states that negative attitudes towards gender equality and mainstreaming of gender also contribute to hindering gender equality in the public service.

These challenges have also been noted within the Agricultural Training Institutes (ATIs). The gender audit of 2015 also showed that in these institutions, gender imbalances were still observed and did not get the necessary attention. It is not surprising that Gender Mainstreaming (GM) was not selected as a priority area when the COLAs were being defined by the ATIs at the beginning of the project in 2011

In a number of activities conducted within the ATI's, it was evident that gender sensitivity was an area of concern. This became clear in a one day gender workshop at the end of 2013, with Matrons and Wardens of the Agricultural Training Institutes (ATIs). At the workshop the participants revealed that sexual harassment, gender insensitive behaviour, discrimination based on colour/race and/or gender/diversity, blind services were well present within the ATI environment. In view of these findings, and the absence of awareness, knowledge and focus of senior management on addressing gender related imbalances and the need for adherence to National Policies, the Director Sectoral Colleges, DAFF urged all ATIs to participate in the GM COLA in March 2014.

Definitions used

In order to have similar understanding of terminology being used, the following definitions were used in gender related activities in the project:

Gender: When using the term gender, people often interpret it as "women", but gender is understood as *"Roles, responsibilities, rights, relationships and identities of men and women defined or ascribed to them within a given society and context. Changeable over time, between and within places."*

Gender Mainstreaming: When dealing with Gender mainstreaming, it is conceptually understood as *"A process of ensuring that all work, and the way it is done, contributes to gender equality by transforming the balance of power between women and men"* (Oxfam, 2005).

Another important definition is the Public Sector Commission (2006) definition of Gender mainstreaming *"as a process which entails weaving into the consciousness and actions of individuals and organizations an impulse to promote equality between sexes"*.

South Africa's definition of - and goals towards achieving gender equality are guided by a vision of human rights which incorporates acceptance of equal and inalienable rights of all women and men. This ideal is a fundamental tenet under the Bill of Rights of The Constitution of the Republic of South Africa, 1996 (Act 108 of 1996).

In this context, an intervention for gender-addressing imbalances based on sex, is often taken as a wider concept addressing diversity i.e. differences based on race, religion, ethnic origin, etc.

Inclusive Education: denotes the promotion of *"a learning environment which assures full personal, academic and professional development of all learners irrespective of race, class, gender, disability, religion, culture, sexual preference, learning style and language"*. Since the COLA on Gender Mainstreaming was an essential component in the transformation of Colleges of Agriculture into ATI's the term "inclusive education" was adapted to the language and practices within the COLA.

5.2 Gender mainstreaming COLA

5.2.1 Objectives

The GM COLA was one of the COLAs in the TACATI project, established following the intervention of DAFF and its prioritisation of gender inclusive environment. The Gender Mainstreaming COLA consequently started in March 2014 with an inception workshop. It appeared that participants' knowledge on gender was very limited, and for some participants it was the first time they had been exposed to the interrogation of the concept of gender and its diverse interpretations. However, they showed a keen interest and identified the need to strengthen gender sensitivity in all aspects of the ATI's work including areas such as:

- Policy development and monitoring & evaluation;
- Recruitment process of staff/students;
- Student affairs;
- Activities designed to raise awareness on gender mainstreaming (internally and externally);
- Curriculum development processes;
- Team building initiatives to promote commitment in terms of delivery of gender balanced outputs.

Based on the identified needs in this workshop, the following objectives were - tacitly - set by the GM COLA:

1. Increased gender awareness amongst staff on what gender sensitivity implies;
2. ATI awareness and preparation to perform in a more gender sensitive way (management and operational services);
3. Services provided by the ATI (education, research, publication, etc.) should be gender balanced.

To meet these objectives, a series of activities were necessary, of which a gender audit trajectory was identified as the most appropriate starting point. Such an audit would provide an entrance point for

discussion on the actual state of attention to gender aspects in all elements of the ATI. Relevance of GM in other topics such as CBL and Quality Assurance could also be made explicit.

Participants suggested that the gender audit be implemented at each ATI. In order to avoid an externally imposed gender audit, using already existing tools, the GM team opted for the implementation of a gender audit prepared and executed by the participants. This would serve as a learning experience for the participants on content matters (gender) as well as processes, e.g. implementation of interviews etc. In the beginning eight ATIs showed an active interest in the GM COLA, whereas towards the end ten (of the eleven) ATIs were actively involved. The following section explains the participatory process of the entire gender audit trajectory.

5.2.2 Methodology for the gender audit trajectory

The gender COLA organised a series of workshops which included one together with the QA COLA and also undertook a gender audit to establish benchmarks for gender practices within the ATI's. The gender audit trajectory, which was the main focus of the GM COLA, consisted of the following phases:

1. Preparation of the gender audit;
2. Implementation of the gender audit;
3. Analysis and reporting on the audit;
4. Integration of gender in AC aspects.

A preparatory workshop for the gender audit was organised. This workshop provided an opportunity for 23 participants to develop an understanding of gender mainstreaming based on the Integrated Organisation Model. The participants developed questions on different gender topics in order to facilitate gathering of information. Participants looked at the different aspects the ATIs related to:

1. Gender sensitivity of the ATI and its linkage to the external environment: e.g. external stakeholders, adherence to policies, mission statement;
2. Gender sensitivity of the internal organisation of the ATI: systems, culture, structure, leadership etc.;
3. Gender sensitivity related to the ATI's products and services: agro processing, farmer training, training on demand, graduates FET, HE and training, advisory services for farmers and policy influencing.

At the workshop participants identified the questions that they thought were necessary to be addressed in the audit. The questions were then matched with the appropriate methods for collecting data, such as focus group meetings, individual interviews and adding secondary sources.

In addition to staff from the ATIs, DAFF delegated officials to participate in the whole gender audit trajectory. The Chief Director for Sector Capacity Development also participated for a day in the gender training. This was perceived as an important sign of support for the gender COLA.

Following the workshop, gender assessment teams were formed, each consisting of four staff of the assessed ATI and two of a neighbouring ATI and they executed the two day gender audit. Each team was led by a DAFF resource person, the GM coordinator or the national gender consultant. The team went around the ATI to make observations, and collected data. They also requested information on staff composition and students.

In total, nine ATIs were assessed, giving a total of nine questionnaires. The completed questionnaires were then processed by the international expert and a scoring overview was provided for the nine participating ATIs. Some examples are provided in table 5.1 and figures 5.1 and 5.2.

The results of the interviews/questionnaires were reported in an excel sheet and a narrative report for process description².

² The questionnaire can be found at www.TACATI.webs.com or contact MDF, mn@mdf.nl

Table 5.1

Example of questions in excel sheet for reporting

Gender audit questions			
2. Gender sensitivity of the internal organisation of the ATI	1.Strategy	16. Is the ATI strategy focussed to encourage a different distribution of tasks and responsibilities amongst women and men at the ATI	2
Total average		17.Does the organisation have an explicit gender policy concerning its own staff, e.g. maternity leave arrangements?	3
3.19		Average	2.5
	2.Structure	18.How is the number of women and men distributed over the different departments?	2
		19.Does the organisation give female and male staff equal access to challenging functions, e.g. senior and special task positions?	4
		20.What is the gender breakdown at management?	3
		21.IS there a gender accommodative Academic Board of Governance (gender) balanced in composition?	1
		Average	2.5

After the gender audit, the audit teams reflected on their performance as auditors and the process of engaging the ATIs. They indicated that in some instances, it was difficult to remain neutral as a researcher and resist the urge to make some recommendations on the spot. In addition, this enabled them to take ownership of the content and process of the gender audit, and an opportunity to look at the ATIs from a different perspective.

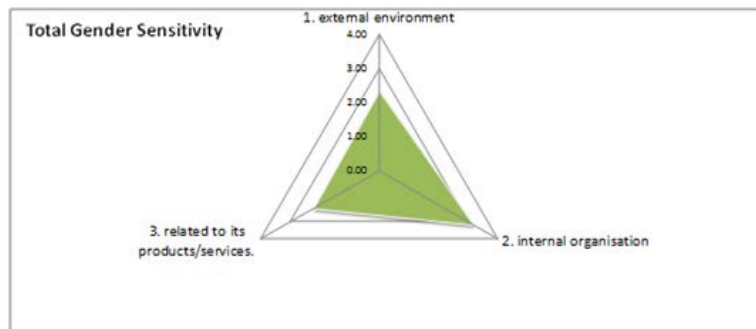


Figure 5.1 Example of graph summarising the total score of an ATI

Figure 5.1 provides the scoring of one of the ATI's on the three main topics which were assessed. This ATI scores 3 points (out of 4) aspects of the "internal organisation" (e.g. gender balance in management level) and scores about 2 points for the other two areas "external environment" (e.g. alignment of ATI policy to the "National policy framework for gender equality in the Public Service") and "related to its products/services" (e.g. gender responsive education materials and teaching methods). This implies that there is still room for the ATI to make it more gender friendly and gender balanced related to these topics. The overview, based on preliminary analysis of the data formed the basis for discussion in the next workshop. Figure 5.2 provides the total score per ATI and shows the deviation from the average.

Figure 5.2 shows per ATI, the individual average score for the three topics outlined in figure 5.1. The horizontal line shows the average score for ATIs with deviations per ATI.

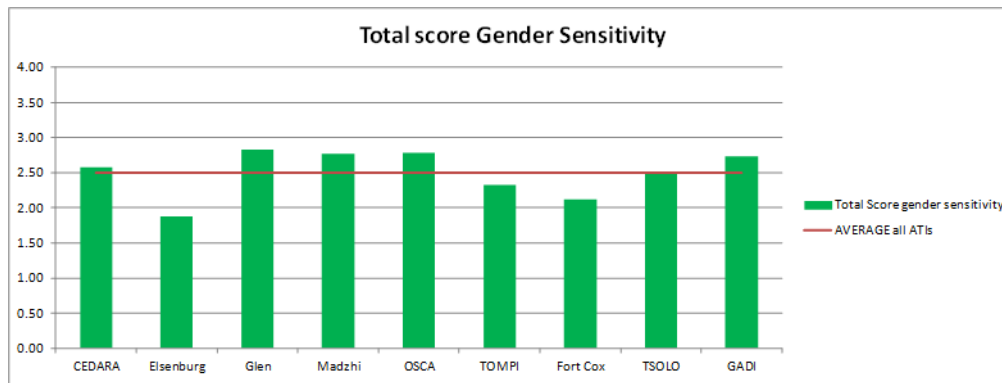


Figure 5.2 Score per ATI and Average for nine ATIs

In the next workshop on “Gender audit and the way forward” (April 2015), the facilitator guided the group along the steps from data understanding to conclusions and recommendations. All data (graphs and narrative information) was discussed in small groups. An analysis was executed per ATI, conclusions were drawn and recommendations formulated per ATI and for the entire group of ATIs.

After the workshop, the gender mainstreaming COLA Coordinator gave a presentation to the Association of Principals of Agricultural Colleges (APAC) (July 2015) in order to gain support from highest level of the ATIs. The principals received the results of the gender audits for their respective institutions. The feedback obtained from APAC was that the principals would also appreciate exposure to the training sessions.

A joint workshop of the GM and Quality Assurance COLAs held in August 2015 allowed mainstreaming of gender in the Quality Assurance Policy and QA documents of the ATIs. A framework for Gender Policy, as an integral part of the quality assurance, was developed. Six principals of the ATIs participated in this workshop, a sign of growing awareness and support.

Findings of the gender audit

In analysing the data from the gender audit, the participants observed that the findings of the gender audit for the ATIs revealed many common issues for concern which included:

- Limited gender/diversity awareness at institutions;
- Financial and infrastructure resources not based on gender needs;
- Staff composition (management and academic) at the ATI’s (Human Resource Management) was gender imbalanced;
- Senior staff composition was imbalanced e.g. underrepresentation of female principals (three) of the eleven ATI’s;
- No gender policy to provide guidance for ATIs regarding gender issues. ATIs rather adhered to provincial policy, if any existed;
- Content of the curriculum and the delivery were not gender responsive;
- Infrastructure/facilities at the ATIs were not gender sensitive.

It was agreed that these were all essential elements to be addressed for promotion of a gender sensitive and conducive learning environment. In the audit and in the ensuing discussions, the concept of gender had been expanded in a sense to incorporate socio-cultural aspects of the male/female dynamic, as well as other facets of society such as youth awareness, discrimination based on colour, race, or disability, etc.

Discussion and recommendations

Based on the gender audit results and the follow up discussions, some remedial actions were proposed. These are outlined below.

Awareness raising at different levels was considered essential and would include:

- Sensitisation of management on GM e.g. workshops for APAC and Principals & Sector Transformation Directorate DAFF;
- Implementation of awareness campaigns for lecturers and support staff at ATIs;
- Organising women empowerment programmes for staff and students.

The workshop also recommended that policy on gender mainstreaming and support services be established through:

- Development of a GM strategy for different focus areas: e.g. infrastructure and facilities, quality assurance, CBL/Curriculum, rural wealth creation, diversity;
- Establishment of GM for a in each ATI and across the ATIs;
- Gender mainstreaming budget should be made available in all ATIs for addressing gender needs and special activities;
- Facilities at ATIs to be made gender friendly.

Additional measures pertaining to representation and content matters were also suggested:

- Equal representation of male and female at different levels be an integral part of the recruitment policy;
- Content of modules to be assessed for gender mainstreaming and learning methods/tools to be made gender/youth responsive.

Sensitisation, in terms of gender mainstreaming, of senior management at an institutional level, as well as of the Provincial leadership, was an element of extreme importance for the gender COLA. Auditors were of the view that gender mainstreaming is crucial not only for ensuring equity in the functioning of the present institutions, but also assure that institutions and their leaders do take gender mainstreaming responsibilities seriously as they shape future generations.

The workshop also noted with concern that leadership within the Student Representative bodies at ATIs were constituted mainly by male students. During discussions it was alluded to, that one of the reasons for this might be due to female students lacking self-confidence to take on roles of leadership. This matter needed attention and could partly be addressed by paying more attention to introduction of gender sensitivity in all aspects of education within the ATI's. It was further proposed that more efforts should be made to ensure that the content and delivery of the curriculum was gender sensitive.

In order to get more systematic support for gender mainstreaming it was proposed that a Forum to address gender issues at each ATI be established. It should be composed of three members, and there will be a need to develop uniform terms of reference for these forums to focus on issues raised by the audit and other gender- related matters. The participants also acknowledged that some institutions had more experience than others, so exchange between ATIs would be fruitful for all. The group therefore proposed an inter-ATI Forum as well. It was reported at the end of the project that some ATIs had already taken action by installing a Gender Committee, and appointing a gender focal person and were addressing the imbalances in a more suitable manner

As a result of the joint workshop of Gender and QA COLAs, a Gender Mainstreaming (GM) Policy draft was developed which could be adapted by each ATI. For extra budgetary support, it was decided that the ATI should decide themselves how to allocate a budget for GM activities, that be it content-related, for capacity strengthening on GM or for infrastructure. A possible source of funding could be from the Economic Competitive Support Programme Funding.

Regarding the appointment of female Principals for the ATIs, this was the mandate of the Provincial Department. DAFF could, however, discuss with the Provincial Departments of Agriculture, the need for a more balanced composition of the ATI Principals nationwide.

5.2.3 Challenges encountered

For the first workshop, staff in attendance did not have sufficient decision- making power within their institutions which were required to implement gender mainstreaming at a strategic level. As a consequence, DAFF made an immense effort to ensure appropriate representation of the ATIs at subsequent workshops. The lack of continuity of ATI staff being involved in the entire process led to some draw backs, which might have affected the quality of implementation and analysis of the audits. Internally within the ATIs, some staff involved in the gender audit trajectory were "labelled" negatively for taking up the gender topic explicitly.

5.2.4 Lessons learnt

In terms of the initial approach to the introduction of COLAs, gender mainstreaming is a priority topic that ATIs should have been exposed to before commencing with other COLAs. This measure would have allowed them to mainstream gender- related issues within the other COLA topics. Unfortunately, due to it having been instituted at a late stage, it did not receive attention at the appropriate level required to influence a shift in mind set regarding gender and diversity at these institutions.

participatory gender audit process was time- consuming but rewarding. Participants, both women and men, reported that it was a very steep learning curve. They felt empowered coming from having no experience to being able to execute gender assessments. At the end they felt motivated and supported to work on the gender/diversity gaps. Relationships between ATIs were developed. Staff involved in this process linked up with each other to exchange experiences. They also perceived that the topic of gender had become more open for debate and that Principals were more open to suggestions.

Concerning the implementation of the gender audit, the auditors revealed that the ATI's were generally cooperative in the execution of the gender audit, but that senior management was not so much involved. The gender audit teams cooperated well but the two- day period was too short for this exercise, also in view of travelling between ATIs

The word "audit" was not always very well received and made some people to fear the assessment. Some improvement on the tools (questionnaires) was also recommended.

In view of the novelty of the entire event for the participants, more time should have been given to prepare people on doing the Gender Audit. A pilot exercise would have been helpful for building experiences, testing the questionnaires and use of language.

The presentation of recommendations in the meeting of the Association of Principals of Agricultural Colleges, was crucial for the topic receiving wider and collective attention. The joint workshop for integration of gender in the quality assurance frameworks (policy and score card), guaranteed a more systematic assessment of gender aspects in ATI related education as well as organisational aspects. Support from DAFF was also crucial in order to get the topic explicitly on the agenda of the ATIs.

5.2.5 Conclusion and future perspectives

Although DAFF is convinced of the need to pay more attention to gender/diversity - and this is supported by several national policies dealing with aspects of gender - the implementation of these policies at an operational level is inadequate to affect meaningful change. This, in essence, indicates that the gender/diversity topic is still an area which requires a great deal of advocacy.

The COLA was pleased with the integration of criteria and questions for gender sensitive assessment in the QA policy and the scoring list, but they are also cognisant that this does not imply that ATIs will automatically take the necessary measures to address gender/diversity imbalances. On reflection it is recommended that the present gender audit list be shortened and (bi-) annually repeated, by a combined team of the ATI itself and neighbouring ATIs, to stimulate cooperation, exchange and to keep the ATI paying continuous attention to this important topic.

In order to support and stimulate the ATIs to continue to pay attention to gender and diversity aspects, it is recommended that ATIs keep on reporting on the ongoing activities such as:

- Staff provision: report on number of males / females appointed
- Implementation of audit activities per college
- Sharing of gender mainstreaming issues per college.

In this way, the objectives of this GM COLA can be realised beyond the project.

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6 Rural wealth creation

Somlotha, Z. and Cebani, T.

6.1 Introducing the concept of rural wealth creation

As in the words of Sir Partha Dasgupta (2012), the time has come to pay special attention to rural wealth creation (RWC) and to look for alternative measures. He argues that: “until the yardsticks which society uses to evaluate progress are changed to capture elements of long-term sustainability, the planet and its people will continue to suffer under the weight of short-term growth policies”. In this chapter the authors define the operational terms, explore literature on RWC that could inform similar projects in South Africa, and outline the principles that are applicable to projects geared at RWC or sustainable development.

6.1.1 Defining RWC related concepts

The 2012 inclusive wealth report provides a succinct definition of inclusive wealth which is defined as the monetary measure which includes the sum of natural, human and physical assets. It further explains what these assets classes entail:

- Natural Capital includes land, forests, fossil fuels, and minerals;
- Human capital is the population's education and skills;
- Physical (or "manufactured") capital includes such things as machinery, buildings, and infrastructure.

It is remarkable to note that rural communities in the world are mostly seen as poor despite the abundance of assets and indigenous knowledge to improve their livelihoods. It is this understanding that has driven South Africa to prioritise RWC as part of government strategy to fight poverty.

RWC is defined by Pender, Marre and Reeder (2012) as an effort to develop rural assets (natural, human and physical) in order to contribute to larger regional economies. They argue that although the concept of RWC is attracting substantial attention among policy makers, development funders and practitioners, research on this topic has been limited.

They also highlight that RWC is highly context-dependent. To illustrate such, there are policies to promote agricultural production seeking to create wealth in communities with fertile farmlands, adequate water supplies and transportation infrastructure, and an entrepreneurial class of farmers or other investors capable of organizing and managing such investments. Where these factors are not addressed, efforts to promote agricultural production may be unsound and could deplete local wealth (Pender, Marre and Reeder; 2012).

According to Levy (2012) “Rural Wealth Creation in Communities” is a systems approach that recognizes that connections between communities and markets is the foundation of economic development. This approach emphasizes the importance of investment in locally-owned and controlled place-based assets. Unlike traditional economic development models, this framework focuses on collaboration, seeks to build multiple forms of wealth in the community and builds the relationships between rural and urban areas.

6.1.2 Principles of the rural wealth creation approach

There are four fundamental principles to the Rural Wealth Creation Approach as outlined by Perry (2012):

1. **Focus on place:** The Rural Wealth Creation Approach recognizes that opportunities and challenges are different in each rural community, and that this work is inherently place-based. At the same time, rural people and places need to be connected to the demand, knowledge and opportunities that exist outside their borders;
2. **Incentivise collaboration and community outreach:** While traditional economic development models have often fostered a sense of competition within a region, the Rural Wealth Creation Approach emphasizes collaboration. Building wealth requires collaboration between individuals as well as communities. For example, the wealth creation approach recognizes the importance of connecting rural producers to markets, which are often in urban areas. It is possible to make this connection in a sustainable way by building a “value chain” that links local producers and others to regional and national demand for products and services that embody a range of values from social justice to environmental sustainability;
3. **Create multiple forms of wealth and job creation:** The Rural Wealth Creation Approach recognizes that there are many kinds of wealth, beyond just financial, that benefit individuals and communities. For example, a community may have natural capital, such as renewable energy resources and healthy forests, or social capital, which includes the relationships and networks that build a strong community. The Rural Wealth Creation Approach helps communities to see the potential harm in building one type of wealth at the expense of another. According to Deb Markley (2015) of the Rural Policy Research Institute Center for Rural Entrepreneurship, the first step in building multiple forms of wealth is to ‘do no harm’: “You don’t create jobs that put people’s health at risk. Instead, communities should seek economic development opportunities that build multiple forms of wealth and that are more likely to benefit their community over the long-term”;
4. **Emphasize local ownership and value addition:** Local ownership and/or control of local assets is a key component to building wealth that remains in, and provides benefits for the entire local community. Besides generating financial capital, local ownership also helps build political capital.

6.1.3 Framework for rural wealth creation

The Institute for Sustainable Communities (2015) has identified seven forms of community wealth which are: financial, natural, social, individual, physical, intellectual and political capital. This institute believes that a rural development strategy that builds many forms of wealth is more likely to create prosperity and local benefits that will stay in the community over time.

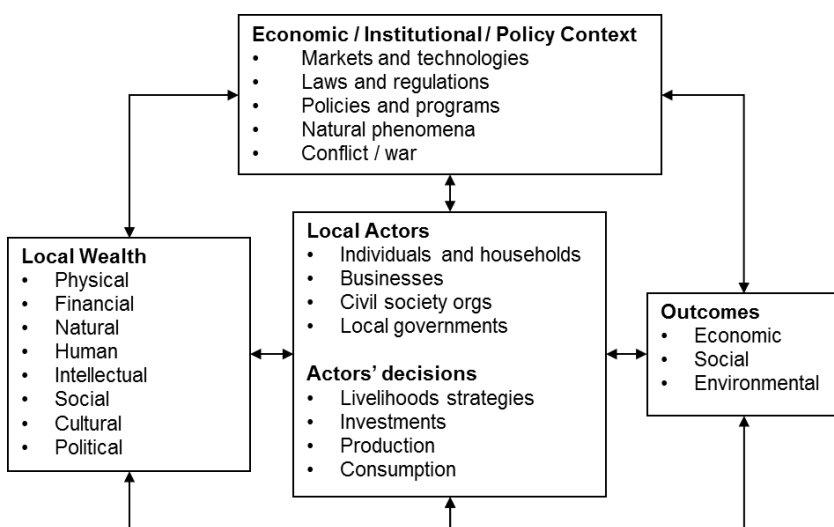


Figure 6.1 Conceptual Framework for Rural Wealth Creation. Source: USDA, Economic Research Service

This framework relies heavily on the acknowledgement of the importance of an enabling policy context which should acknowledge physical, financial, natural, human, intellectual, social, cultural and political

structures which need critical actors who are able to factor decisions of actors in respect to livelihood, investments, production and consumption. All these should be factored to produce outcomes that will impact positively on the economic, social and environmental environments.

6.1.4 Rationale for ATIs addressing rural wealth creation

ATIs are mostly situated in the middle of rural and semi-urban communities. These communities are often characterized by under-development of assets at their disposal (natural, human and environmental), unemployment, poverty and inequalities.

According to the ATIs policy for training (2014) the ATIs are seen as strategic tools to drive RWC, with staff having a variety of skills to support farmers with the skills necessary to improve agricultural production along the whole value chain and access to inputs and output market.

The same norms and standards state that ATIs must be centres of excellence for RWC. To achieve this, effective and significant RWC programmes that are responsive to that need must be developed and implemented. To ensure that this happens, there is a need to improve resources of the ATIs (infrastructure, IT, funding model and human capital) and outreach programmes (community engagements, partnerships, community based research and capacity building).

The work of the RWC COLA was informed by outcome seven of the South African government, the National Development Plan, the Agro Processing Strategy, the Agri Parks Model and mandates of various Departments who are working together to realise the dream of creating vibrant, equitable and sustainable rural communities and food security for all. These plans are cascaded to provincial plans including the municipality economic development plans. It is within this policy context that ATI's have found a niche to contribute to issues of RWC and food security. ATI's are well-positioned to perform the following functions:

Identification, diagnosis of problems and opportunities

This is through outreach programmes facilitated by the colleges. The community may visit the institution to seek for help and intervention or the college itself may get involved in a fact finding mission. Whether the community or interested party visits the college, or the college gets involved itself, a document from this process has to be developed to profile the project using a particular format. There are number of reasons why this process is essential: it helps to identify the potential projects and their niche markets, and also to document known causes of failure in community projects.

Deciding where and how to target interventions

It is important to enter into an agreement with the community and other stakeholders. During this process it is important to ensure that a careful identification and selection of stakeholders is done. This is also referred to as stakeholder mapping (Departments, private sector, NGOs, Civil Society, Community, traditional authority). This process cannot be done without understanding the mandates and objectives of particular stakeholders. Examples of agreements are Memorandum of Understanding, Contracts, Social Charters and other partnership agreement. In these documents stakeholders commit themselves to supporting the project.

Improving design of interventions

This involves clarifying of the programme theory and impact pathways. The ATI can package the intervention to suit the need of all the stakeholders.

Monitoring the implementation and performance of interventions

Once stakeholders have pledged support for the project or initiative, it is important that certain committees are established to deal with oversight and technical aspects of the project. There are targets set for the project and reporting against those is very critical. The targets may include, but are not limited to number of jobs, hectares of land to be planted, number of cooperatives to be trained, number of silos to be constructed, etc. All these need to be regularly monitored.

Assessing the impact of specific interventions

Now one needs to measure the impact of specific interventions. A good example is when you measure poverty in a particular area before and after the intervention. For example if the poverty in the area is as high as 60% before the intervention and after the intervention it goes down that means that the

project has a positive impact in that poverty has declined as a result of the project taking into consideration all other factors that might have aided the results.

Another example is a community where before the intervention there is no water purification facility and after the intervention a purification facility has been introduced. In this case the quality of water for the community is improved and this in turn has improved the quality of life.

6.2 COLA on rural wealth creation

6.2.1 COLA objectives

The RWC COLA adapted and assimilated the conceptual frame of RWC as a means of ensuring sustainable development and also as a catalyst for assuring development within rural communities to address issues of entrenched poverty and food security. The RWC COLA was established as an important catalyst for these ideals as outline in the following objectives:

- To ensure that ATIs are strategically positioned as centres of RWC in line with national and provincial priorities;
- To ensure that ATIs are capacitated and resourced to perform as per the mandate contained in the Norms and Standards of the ATIs in the context of RWC;
- To ensure that ATIs learn from each other on how to go about facilitating RWC;
- To ensure that ATIs develop and formulate RWC approaches tailor-made to respond to local and regional situations facing rural communities;
- To learn, adopt and use tools that seek to develop and sustain rural wealth and livelihoods.

6.2.2 COLA process

The RWC COLA followed a systematic process where it looked at case studies, visited ATI's, looked at existing cooperatives, developed a social charter, examined the rural development and agro processing strategies and explored different financing models. All the activities of the COLA are captured below and briefly explained and examples are provided where necessary.

Discussing case study and community outreach

The case study discussed was based on the project implemented for RWC as a Land Reform project in the Fish River of the Eastern Cape whereby farmers (a) who previously operated the commonages had been selected and allocated farms for income generation and job creation; (b) people who were landless had been given farms; and (c) former farm workers were now owners of the farms.

The other example discussed was the outreach program by the University of Kwazulu-Natal where a group of women participated in crop production to generate rural income and create own employment using indigenous knowledge systems in cropping.

Visiting ATIs to identify, adopt and profile community projects

The visits to ATIs encouraged participating staff to identify and profile the community project(s). A format of how to profile the project(s) was discussed at length and participants practically presented the profiles of the projects(s) using the format.

Discussing the role of cooperatives in rural wealth creation

The role of cooperatives was discussed at length looking at the Cooperative Act, governance, principles, performance, successes and failures and some international statistics. Creating cooperatives is one of the strategic and economic vehicles and drivers of RWC. Any entity that is registered or community members organized in a group, family or sometimes sole proprietor involved in a particular business and commercial or social project may become important. Capacity building for and compliance with relevant and government policies are necessary and required for the cooperatives or other similar entities.

Developing a social charter

The team worked on a social charter. This is a social agreement among social partners or stakeholders or structures who share a common goal and vision. The agreement contains roles and responsibilities

and commitments of each party to the project or program. These can be a social project or non-profit or Non-Governmental Organization or economic / for profit seeking venture. It can also be a poverty alleviation, value addition, security project or commercial business. The project can be about the protection of the environment and meeting the objectives of the project. Careful selection of the stakeholders is important. Commitment by each stakeholder can be both financial and non-financial.

Reviewing the rural development strategy

The Rural Development Strategy of South Africa was outlined looking at its rationale, objectives, progress on the implementation and the results of such strategy. The RWC COLA also looked at its salient outcomes and how these could contribute to the work of the COLA.

Discussing an agro-processing strategy

The strategy was discussed in detail. The participants engaged with the statistics in terms of agro-processing in South Africa; looked at the implementation of the strategy, identified linkages between the ATIs and the agro-processing initiatives and at creating agro-processing centres within the rural area.

Discussing financial modelling, benchmarking, business planning and Cigar Box Method

Financial modelling started with business planning where a format was discussed in detail. It was stressed that it is important for the individual or businessperson to draft the business plan as it increases understanding and eases the implementation of a particular plan. In many cases professionals develop the business plans and if the beneficiaries do not own the business plan it is difficult to implement. In the business plan there are a series of financial elements such as enterprise budgets, whole business budgets, cash flow statement, profit/loss statement, comprehensive statement of income and statement of assets and liabilities. All these statements have been discussed and developed during the life of the RWC COLA.

Benchmarking was also discussed in depth and COLA participants are equipped in that space. The Cigar Box Method of Olivier van Lieshout and Orlando van Geunsis, a toolkit which consists of a series of spreadsheets to help entrepreneurs, notably those in agribusiness in emerging markets, to calculate the costs of goods, margins, contribution, break-even volumes and profitability was also discussed in detail, illustrating detailed financial and physical record keeping.

Interviews and outreach have been used to illustrate how one can obtain information from the community and present it in the form of project profiling and financials.

6.2.3 Conclusions and recommendations

RWC is complex in nature and participants would have benefitted from more time and interaction with experts in order to have an understanding of such complexities and how to go around dealing with them and be fully appreciated by stakeholders within and outside the ATIs.

The first two participatory workshops served as energizing start-up activities of the COLA and a number of methods and tools were shared, notably a value chain approach and a relevant agri-business planning model. The third participatory workshop, which was also a close-out, gave participants an opportunity to simulate some of the tools such as development of a social charter and development of financial statements from raw data. However, this did not give participants confidence yet to apply what they have learnt without guidance.

Currently there is a deficit of an overarching systemic model for RWC. An adapted version of Porter's diamond model (1990) could potentially fill this gap. To operationalize this model, it could be complemented by a set of generic interventions such as the introduction of Rural People's Organizations, Agribusiness Development, Public-Private Partnerships and network marketing arrangements. Such a comprehensive model could form a pillar of the process map including the set of generic types of interventions. This approach could also be aligned to the Agri-Parks concept that is now being adopted as a national model for local economic development.

The fact that the TACATI project has ended, should not stop continuation of RWC COLA activities. Development and enforcement of process map and standard operating procedures are critical factors that will make ATIs authentic centers of RWC. It is in the best interest of the transformation process to

make every effort to allow for the achievement of the above listed milestones. Failure to do so will result in the dream of ATIs becoming centers of RWC never coming to fruition.

Should ATIs wish to continue integrating RWC principles into their community projects, they must consider the possibility of facilitating access to credit, improved technology, farm management skills and market information. Some of these elements can be achieved through the implementation of public-private partnerships.

Commodity groups are highly specialized entities that could assist with specialized training of ATI staff to better capacitate them to train farmers on issues such as hydroponics, vermi-culture, apiculture and other commodities that will contribute to the creation of vibrant, self-sustaining rural communities. It is recommended, finally, that ATIs prioritize in the budget to hold quarterly workshops for reviewing and sharing of best practices through a peer to peer sharing culture that has been fostered by the TACATI project.

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7 Analysis and lessons learnt

7.1 Introduction

The last chapter of the book presents an overall analysis and lessons learnt that emerge from the preceding chapters and the experiences in the TACATI project. Firstly an overall analysis and related lessons learnt are provided. The conclusion comprises reflection and lessons learnt by the project management team.

7.2 Overall analysis and lessons learnt

In follow-up on the previous Nuffic project Improving the Capacity of Agricultural Training and Education (ICATE) which strengthened four selected Agricultural Colleges in their managerial and education & training performance, this TACATI project encompassed all twelve Agricultural Training Institutes(ATI) in the Agricultural Education & Training Sector (AET) in South Africa.

This project aimed to support the Government of South Africa in the realisation of the College Revitalisation Plan (CRP), which had high sectoral relevance and political support. The fact that all ATIs in the AET sector were involved in this TACATI project, created a strong added value and allowed the ATIs to identify common interests which finally had a multiplier effect.

The Department of Agriculture, Fisheries and Forestry (DAFF) being in the driving seat - who continuously reminded the ATIs about the link between the CRP and the support for its realisation by this Nuffic project - was crucial for keeping the ATIs alert and involved.

The resources of the South African Government made available for the College Revitalisation Plan (CRP) allowed for complementarity in covering of costs involved in the functioning of the COLAs. Especially the up scaling of certain COLAs from four interested ATIs to e.g. eleven ATIs surpassed the financial capacity of the project. DAFF and the Provincial Departments of Agriculture were able to free additional resource for continuation of the COLAs with larger groups.

ATI's participation in COLAs

After the introduction of the COLA concept, TACATI management and APAC came up with nine issues that could be subject of study in a COLA, like CBL in HE & FET, Quality Assurance and Rural Wealth Creation. Gender was not perceived as a priority topic at the start of the project.

ATIs could subscribe to the COLA of their preference aiming at a number of about four ATIs per COLA. Unfortunately, the process of finalising the inception phase of the project and getting organised slowed down the actual start of the COLAs about one and half year later.

After some time DAFF Management decided that all Colleges should take part in all COLAs. There was a need to convince other ATIs to actively participate in the project. This enforcement may be one of the reasons that some participants of the COLAs at the start of their COLAs were not fully committed to the task and that some Colleges were not committed to (all) the COLAs.

At project completion, this still remained a challenge in some of the ATIs and a threat to the realisation of all learning points and proper use of instruments developed.

COLA approach for collective learning

The COLA workshops, visits and trainings allowed staff from different ATIs to come together, who had never met before. Colleagues in similar functions across the ATI's shared ideas and practices for quality assurance (QA), Competence based learning (CBL), Rural Wealth Creation (RWC) and Gender Mainstreaming (GM). This led to shared and common understanding of the same concepts and the production of concrete products tailored to the characteristics of the ATI and their clients. Overarching topics like Quality Assurance and Gender have produced documents which allow the ATIs

to use similar documents for addressing these topics. Thus, this has created the common environment where peers learn from each other and that has had an influence on how the ATI's approach relate.

The staff across the ATI's have had cross visits to each other during the workshops and audits and that brought a positive light to the ATI's. Thus, the colleagues had the opportunity to see the infrastructure and systems of other ATI's wherein they themselves can adopt and modify to fit their practices and functions. This project created the platform for networking between the colleges almost at all levels, where the staff members are able to request an advice and could serve as the external examiners between each other. In addition, it has created collegiality at personal and institutional level which facilitates communication and further exchange.

All COLAs organised workshops. In between workshops participants were asked to work on assignments to practice what was learned during the workshop. These assignments were also meant as an input for the next workshop. Participants did not have always sufficient time to complete these assignments. They sometimes viewed the assignments as an extra job that could only be completed in their spare time. Some participants were not prepared to walk that extra mile.

COLA participants were expected to give their colleagues feed-back on the work in the COLAs in order to be able to implement the results of the COLA after its lifetime. In most cases participants failed to do this for the same reasons as mentioned in the previous paragraph.

The late starting of the COLAs (second year) have, to a certain extent, brought in a challenge in terms of meeting some of the deliverables anticipated at the inception of the project. A judgement was also made based on how the COLAs strived to achieve the objectives under strict and short periods. The consequence of this was that more time was still needed to complete a number of tasks that were essential for the project.

The COLA approach allowed new topics to be addressed like Rural Wealth Creation (RWC), requiring a paradigm shift and new ways of thinking. RWC takes stock of value addition, outreach, improved rural income and welfare and opportunities to create employment. In doing this the social aspects of the initiatives and capacity building need not to be ignored. This is a way of introducing a business approach and trace the socio-economic impact of the initiatives that ATI's are involved in.

Also attention for gender mainstreaming aspects in all elements of the ATI was new. For many staff it was the first time to explicitly reflect on gender aspects in the ATI organisational set-up as well as in relation to content matters for education and training services. The base has been put but further attention and support will be required.

Quality assurance - which was a well know topic but without the necessary skills and knowledge - has put itself on the map with clear policy guidelines and instruments. All ATIs have experienced the QA assessment and the notion of all staff being responsible for QA instead of one specialist, is gaining understanding.

The CBL approach - being introduced in the ICATE project and out scaled in TACATI- has been strengthened for FET and HE. Curricula have been developed and staff feels more confident. Some ATIs have fully embraced the CBL approach, other still need more managerial support for allowing staff to develop and implement accordingly.

The annual COLA Harvest meeting allowed for reporting of realisation and exchange of new ideas. Emphasis on ownership and responsibility of ATI to stay involved were important aspects during discussions.

Although Gender Mainstreaming was not selected as a priority topic - by the ATIs- with the start-up workshop of the COLAs, the project and DAFF leadership could have considered another way of getting it mainstreamed. The GM COLA started late and results of the Gender audit trajectory still need further encouragement, support and realisation.

College Management could have played a more active role in this matter by showing interest in the work of the COLA members and by releasing them from some of the routine jobs in the College.

More emphasis could have been put on consequences of the use of the two phase approach: passing on of knowledge freshly gained to colleague staff. This requires attention for transfer of skills and support from management

To mitigate the continuous encouragement for doing tasks - e.g. in between workshops - , strategic leadership from the ATIs and regular feedback and reporting on the progress and challenges of the COLA implementation became very critical. A more structured approach to reporting to the ATIs needs to be sought to ensure that the results of the workshops are acknowledged by the ATI management.

Role of experts

During this project it became clear that the project could not be led by Dutch experts only. For each of the COLAs at least one South African coordinator and a South African expert were appointed. As the project unfolded, the experts and COLA co-ordinators increasingly became the drivers of the COLAs. This was particularly the case in deciding what sessions were required and when they should be conducted.

The South African experts and coordinators also ensured that the arrangements were made for sessions. The Dutch experts provided a more content related supportive role in this regard.

In the previous NUFFIC project with the Agricultural Colleges (ICATE), the Dutch were seen by the ATI as the drivers. This required a mind shift from both sides.

In the future the ATI staff, who have become outstanding experts in their domain, could also be used as experts and be remunerated for the work done.

Other success factors

Specific attention for Information and Communication Technology (ICT) support tools - and having an excellent ICT coordinator - has led to the availability of the same software for all the ATIs, allowing quick understanding of each other's information and exchange.

Having an overall South African project coordinator was crucial for administrative and financial issues. Booking accommodation or coordinating responses from a South African staff proved vital throughout the project. A great deal of success of the project is due to the work done by the local coordinator.

The joint leadership of this project - the project manager of the Implementing Consortium and the project manager of DAFF - was oriented towards the same goal: getting the most out of the project for supporting the policy of DAFF for the ATIs transformation process. Frequent and constructive communication, creativity in problem solving, eagerness to see concrete results and eagerness to bring stakeholders together have been contributing success factors.

Conclusions

The COLA approach has certainly contributed to learning at different levels:

- Personal level for individuals assisting in workshops, training sessions, executing for the first time in their life an interview (e.g. gender audit teams);
- Organisational learning: some ATI are now conscious about their role in order to sustain achievements in the COLA domains. ATIs will put a different emphasis related to the topic of interest. The fact that leadership of the ATI is supportive and monitors the realisation of new products, procedures which have been adjusted, staff eager to assist in assessment of own ATI and develop action plans, are all signs of willingness to be a learning organisation. ATIs, some more than others, have seen the need for renewal of internal procedures as well as the need to adjust their education and training services to the ever changing demands of the labour market;
- Institutional learning: the visit to other ATIs created an enormous added value by reflection and exchange between staff of ATIs operating under different - provincial - rules and regulations. COLAs have produced products based on a generic model which can be adjusted by each ATI according to own situation. Cooperation between ATIs has been established and will continue.

During the closing Conference of the project (October 2015), the presenters made clear that this project had tremendously contributed to the realisation of the College Revitalisation Plan. ATIs are ready to work along the Norms and Standards, officially launched during this Conference.

7.3 Lessons learnt by project management

A number of specific observations and lessons learnt are presented based on the experiences made by the project management. It is hoped that they will assist future projects with the same ambition and level of complexity. Each of them starts with an observation or reflection, after which one or more lessons learnt are provided

Observation

A long inception period took place amongst others due to staff changes at CDI and DAFF, but also because the project helped a transformation process for which partners have to first engage and build a good team. Another reason for the delay was the fact that a dedicated unit was in place by DAFF only by early 2012.

Lessons for future similar projects

1) For such a complex project three months is too short for an inception period, and 2) Allow time for project partner team building and formalization of institutional structures.

Observation

Investment funds were scheduled for GADI and ICT. In the end ICT funds were only ordered later in the project after the ICT needs became known and when the assessment at ATIs was made and the MIS strategy formulated. GADI investments required a considerable management effort as first DAFF procedures were intended to be followed (with draft MoU) but later a private sector service provider was subcontracted. Supply chain management at DAFF is rather complicated, with long procedures that do not suit a Nuffic project with a tight schedule.

Lessons learnt

1) Do not include large investment funds in a Nuffic project for a country like South Africa that has own funds; and 2) ICT investment came late but was logically aligned to the MIS design, which explains the delay. Allow for such flexibility.

Observation

Former CBL projects had already created CBL interest and expertise, which was used to out-scale to other ATIs through the first COLA on CBL. That helped to put the COLA principle in practise and other COLAs followed. Later, most colleges wanted to join all COLAs. Still, cross cutting topics like gender need special attention.

Lessons learnt

1) At the actual start of the programme look for quick opportunities with ownership to kick start the process and get other partners on board; and 2) Make clear that crosscutting issues will be integrated right from the start in line with Government policies and strengthen capacity to assure this.

Observation

At the start, a first group of interested ATIs started with the first COLAs. Later, all other ATIs joined and the results of COLAs were gradually institutionalised by all the ATIs in their curricula, organisational culture and procedures. Some topics like gender still have work to do in the coming years.

Lesson learnt

All COLAs were actually adding value to the College Revitalisation Plan. This was an important overall outcome contributing to sustainable results.

Observation

Over four years some thousands of emails were exchanged and over 1.000 files were created. This was a project with many partners (12 colleges, DAFF, SA experts, four Dutch consortium members). Project management is an intensive and arduous exercise. But maybe more importantly were the physical meetings of project management that are really needed to assure proper analysis and planning.

Lessons for project managers

Instil a commitment from the participants to meet twice-a-year and also a sense of flexibility for understanding each other's working situation and hierarchy, and project updates. Physical meetings to

should also be arranged with a view to assuring quality and progress made in the project. Attempts should also be made to tap into invaluable resources such as Social Media and Skype

Observation

There is a wide variety amongst ATIs in terms of infrastructure, culture, agro-ecological context, historical orientation, etc. Also their interest to become engaged in transformation and work with projects varies. It is therefore logical that some ATIs seized quickly the COLA opportunities, whereas others came on board later. The formal role of DAFF to lead the process was a key condition. Also, APAC provided important strategic guidance and support.

Lesson learnt

Do not impose participation but allow for gradual increase of ownership as the process unfolds and more ATIs join.

Observation

At the start the intention was to organise once a year a Project Executive Committee for overall project guidance. Instead, representatives from Agricultural Research Council (ARC), Agriseta and other South African centres joined the COLAs as per the COLA schedule. Provinces provided important co-funding. Also project progress meetings in South Africa were as much as feasible scheduled during APAC meetings to report and interact with APAC.

Lesson learnt

Try to build upon existing and workable structures and procedures instead of creating new ones.

Observation

Nuffic project-reporting requires detailed alignment with the project logframe and uploading data in the Sustainability Matrix. It is worthwhile to have at least once-a-year a detailed analysis and reporting. ICT supported learning like the Sustainability Matrix helps to identify quantitative data. But that is part of the story: in addition to numbers the stories of beneficiaries are also important in understanding the perspectives and context.

Lesson learnt

Strategic monitoring requires also additional qualitative analysis and reflection to make sense of the quantitative data.

Observation

This project provided a mix of South African and Dutch (international) expertise. These different types of expertise complemented each other in the different teams.

Lesson learnt

For similar projects always consider combining national and international expertise.

Observation

Supporting the management capacity of the main South African partner DAFF was important. Especially at the start it was important to hire additional South African project management expertise as well as ICT-MIS expertise.

Lesson learnt

Allow for flexible contracting of national experts to assure project implementation.

Observation

Nuffic supported the project through annual feedback on reporting and planning, as well as feedback during the annual visits at the Nuffic office. Additional informal communication between project managers and Nuffic was very helpful in resolving emergent issues.

Lesson learnt

The donor can play a crucial contributory role in providing strategic feedback on progress and joining in the reflection process whenever an issue arises.

Observation

A few spill-over results are observed at the end of this project. A key one is the creation of horizontal exchange between ATIs. Most of them were not exposed to other ATIs in the past. Now there is regular interaction at various levels like examination for modules, exchange of information, etc. Another extra result is the stronger positioning of Sector Colleges within DAFF compared to five years ago.

Lesson learnt

Be open to capture unintended results of a project, next to monitoring planned results.

7.4 Concluding remarks

Finally, we close this book with a few last remarks. TACATI project partners and project management are proud of the results we achieved. It was not an easy journey, but it was certainly worthwhile. The ATIs, DAFF and the Dutch partners have come a long way from the start in 2011.

A large project with different partners needs team building at the start. Without the initial enthusiasm of Nuffic, DAFF, the ATIs and the Dutch Partners, this project would not have succeeded. We are grateful for all partners that have co-invested in this project.

Whereas important steps have been made, we also recognise that the transformation of the ATIs is not complete. They will have to continue applying the results and lessons learnt in the TACATI project. We wish them all the best in these next steps and we hope to see many collaborations continuing to prosper in the coming years.

Editors and TACATI management

February 2016

Appendix 1 Bio synthesis of authors

Name and contact: Anton Bloten (aj@mdf.nl)



Organisation: MDF Training & Consultancy, the Netherlands

Role in project: Support in quality assurance and the design of the student-graduate tracking system

Summary: Anton has been working as consultant-trainer and team leader of long term projects in various countries. His area of specialisation is in technical and vocational education and training and Higher Education. In various countries in Latin America, he supported institutions in connecting education and training with the perspectives and demands of local and regional development. From 2004 onwards he supported also long term projects in Tanzania, South Africa and South Sudan and was in charge of the MDF Competency Based Learning Course with participants from African and Asian educational institutions. Based on these experiences he started focussing on accreditation and quality assurance processes as an institutional and strategic instrument for developing and improving TVET and Higher Education, including elements of inclusiveness, gender mainstreaming and sustainability.

Name and contact: Jan (Johannes) Brouwers (jan.brouwers@wur.nl)



Organisation: Centre for Development Innovation, part of Wageningen University & Research centre

Role in project: Project manager for the Dutch Consortium

Summary: Jan has worked in 5 continents for 28 years, combining research, lecturing, evaluations, policy, management and programmatic responsibilities. Presently he works as a senior consultant for CDI and has a portfolio on multi stakeholder change partnership, participative planning and M&E, evaluations, social innovation, policy advise, gender and conceptual development of Theory of Change.

Name and contact: Juan Ceballos-Müller (juan.ceballos@icra-edu.org)



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Role in project: Member of the facilitation team for the COLA on competence based learning in higher education

Summary: Juan has worked in Africa, Asia and Latin America for 26 years, strengthening the capacity of professionals and of inter-organizational and inter-disciplinary teams of staff from education, research and development organizations in 'innovation systems approaches', 'agricultural research for development', 'facilitation of interactive learning' and 'higher education outreach & action research'.

Presently he works for ICRA facilitating multi-stakeholder learning processes and coaching practitioners involved in agricultural and rural innovation processes.

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Role in project: Coordinator: Rural Wealth Creation COLA

Summary: Themba started his career working as a development practitioner at Khula Development Facilitators. He then joined Fort Cox College of Agriculture and Forestry as a lecturer. He became the head of department (HOD), Manager: Rural Development Centre and Acting Principal of Fort Cox College. Currently, he works as a Program: Manager for Agriculture and Rural Development in the Amathole Economic Development Agency (ASPIRE).

Name and email contact: Petronella Chaminuka (pettycham@gmail.com)



Organisation: Agricultural Research Council (South Africa), ICRA Associate

Role in project: Local specialist, HE CBL COLA

Summary: Petronella has more than 20 years' experience in agricultural research, lecturing and capacity building through short courses. She has worked extensively in facilitating multi-stakeholder platforms, and her research is published through various academic channels. She is presently a Principal Economist of the Agricultural Research Council and participated in other NICHE projects in her previous position at the University of Limpopo, and as an ICRA associate.

Name and contact: Prof Lumkile Lalendle: Lumkile.lalendle@nwu.ac.za



Organisation: North-West University

Role in project: South African Expert on Quality Assurance

Summary: He has worked for 30 years in Higher Education and spent directing activities in quality assurance and promotion in higher education institutions, auditing quality in higher Education providers and setting up quality systems and advising on quality assurance in South Africa, Namibia and Mozambique. He is currently the Vice Rector: Teaching, learning and Quality Assurance at North West University, Mafikeng Campus.

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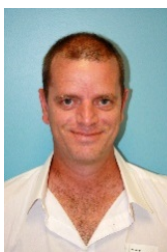


Organisation: Fort Cox College of Agriculture and Forestry

Role in project: Deputy Quality Assurance COLA Coordinator

Summary: He has worked for 10 years in Higher Education as Lecturer, researcher and Total Quality Assurance Manager. Directing activities in quality assurance and promotion in Agricultural Training Institutes, panel member for institutional audit process for Agricultural Training Institutes and setting up quality systems. He is currently the Total Quality Assurance and Student Services Manager at Fort Cox College of Agriculture and Forestry.

Name and contact: Bernd Lütge (bernd.lutge@kzndard.gov.za)



Organisation: Cedara College of Agriculture

Role in project: South African expert for the Competency Based Learning Curriculum COLA

Summary: Bernd has worked at Cedara College for the past 20 years, first as lecturer, then Vice Principal and is currently the Principal. Bernd was instrumental in developing a new CBL curriculum for Cedara College and has a passion for agricultural education and training.

Name and contact: Mr Siyabonga Mazibuko : mazibukosiyab@gmail.com



Organisation: Owen Sithole College of Agriculture

Role in project: Quality Assurance COLA coordinator

Summary: He has worked for 13 years in Agricultural Colleges as a lecturer, quality Assurance manager and as a student service manager. He is currently the Principal of Owen Sithole College of Agriculture and also the Chairperson of the Association of Principals of Agricultural Colleges in South Africa (APAC). He also serves in various national and provincial forums such as National Agricultural Education Training Forum (NAEF) and Provincial Agricultural Educational Forum. He has keen interest in Quality Assurance and development of systems in Higher Education.

Name and contact: Zandile Masuku (masukuz@kzndard.gov.za)



Organisation: Department of Agriculture and Rural Development

Role in project: Gender Expert RSA

Summary: Zandile has been an educator specialising in Food science. She was appointed as Deputy Director by Department of Agriculture in KZN managing youth and women development within the sector. She was also a Provincial Coordinator for Land Care Program where she was responsible for capacity building and gender and social change issues within the program. Presently she works for the Department of Agriculture and Rural Development heading the Women, Youth and Cooperatives Unit where she provides training and capacity building in agribusiness. She also promotes inclusive development and growth of rural communities focussing on gender issues within the agricultural sector

Name and contact: Marie-José Niesten (mn@mdf.nl)



Organisation: MDF Training & Consultancy, the Netherlands

Role in project: Capacity building and Gender expert

Summary: Marie-José has mainly worked in Africa, with long term assignments in Zambia (5 yrs) and Mali (5 yrs). She supported many organisations in strengthening of organisational and human capacity in planning, monitoring, evaluation and learning. She joined MDF T&C in 1993 as trainer, was head of different departments, Director of MDF West Africa (Ghana) from 2011-2013 and operates now as senior consultant-trainer in (gender-sensitive) M&E development, organisation assessment, Result Based Management and Human Resource aspects.

Name and contact: Sivelile Nompuzolo (sivelileN@Daff.gov.za)



Organisation: Department of Agriculture, Forestry and Fisheries, Directorate Sector Colleges

Role in project: Project manager for the South African Department of Agriculture, Forestry and Fisheries

Summary: Sivelile worked as a High School lecturer, A University of Fort Hare Researcher and as a lecturer. Was also appointed as a Kellogg Foundation Fellow working with small-scale farmers under the Initiative for Development and Equity in African Agriculture (IDEAA) programme. Worked as the Principal of Cedara College of Agriculture. Presently he works as a Director in the Department of Agriculture, Forestry and Fisheries heading the Directorate Sector Colleges.

Name and contact: Zingisa Somlotha (somlothaz@ecrda.co.za)



Organisation: Eastern Cape Rural Development Agency (ECRDA)

Role in project: South African Expert for Rural Wealth Creation COLA

Summary: Zingisa has been working in the Rural Development, Economic, Banking and agricultural environment for about 11 years. This ranges from positions of Agricultural Economist, Regional Economic Advisor, Lecturer in Agricultural Economics and Land Bank Consultant. Presently he works as a Manager for Business Support and Social Facilitation at the ECRDA.

Name and email contact: Musandiwa Tshisikule (tshisikulemc@gmail.com)



Organisation: : Madzivhandila College of Agriculture (Department of Agriculture)

Role in project: COLA coordinator

Summary: Musandiwa has worked for the Department of Agriculture since 1987 as Home Economist. In 1997 she was transferred to Madzivhandila College of Agriculture lecturing a variety of courses: agricultural extension, sociology, and communication. In 2002 she was appointed Assistant Director on research and outreach coordination and farmers' training with local communities, Acting Principal in 2003 and is now Principal since 2004, managing the Madzivhandila Agricultural Training Institute.

Name and contact: Jan Ulfman (janulfman@thedairycompany.nl)



Organisation: Aeres

Role in project: Expert on Competency Based Learning in Further Education and Training

Summary: Jan Ulfman holds a Master in Dairy Technology and a Teacher Training Degree from Wageningen University. He worked as a teacher, trainer and consultant in the agricultural sector in Africa, Asia and Europe for 40 years. Presently he works as an independent consultant and trainer providing management, consultancy and capacity building services to small and medium scale enterprises and training institutes in Africa, Asia and the Netherlands.

Name and contact: Clive Viljoen (clive.viljoen@kzndard.gov.za)



Organisation: KwaZulu-Natal Department of Agriculture & Rural Development

Role in project: COLA Coordinator for CBL for FET / MIS Expert

Summary: Clive has worked in the field of Training Resource Development since 2008, before which he studied Agricultural Management at Cedara College and through the University of South Africa. During the TACATI Project, he served concurrently as the Coordinator for the Community of Learning and Action on CBL in Further Education and Training, and as the South African expert for implementation of the ATI Learner Management System.

Name and contact: Melissa Viljoen (melissa.viljoen@kzndard.gov.za)

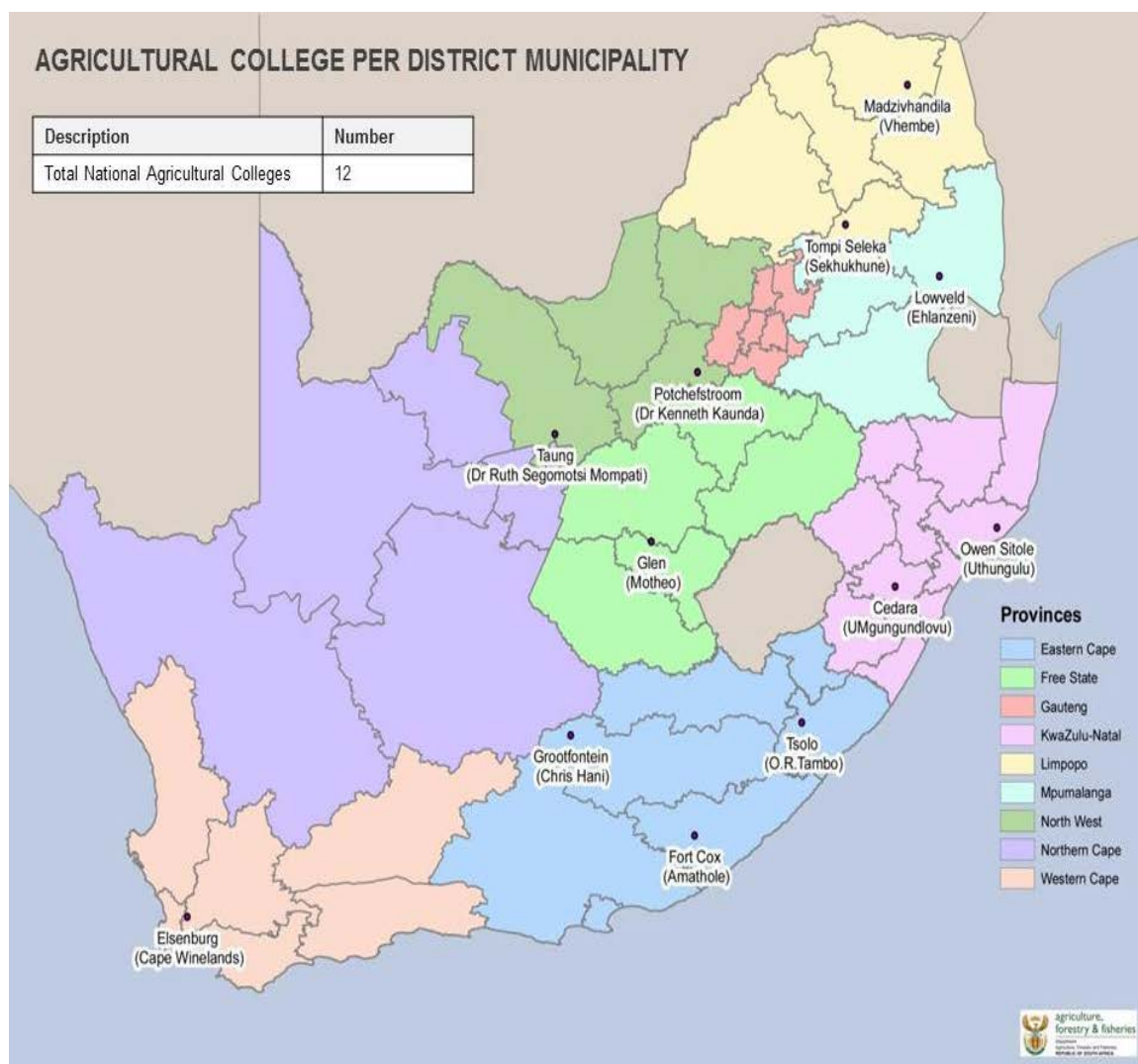


Organisation: KwaZulu-Natal Department of Agriculture & Rural Development

Role in project: Project Coordinator

Summary: Melissa has worked in Structured Agricultural Training for 9 years, providing administrative and project management support to a number of programmes within her Province. Melissa, who is pursuing her law degree through the University of South Africa, was contracted to serve on the TACATI Project due to her experience and understanding of the transitional nature of Colleges in their transformative state.

Appendix 2 Location of Agricultural Training Institutes



To explore
the potential
of nature to
improve the
quality of life



Wageningen UR
Centre for Development Innovation
P.O. Box 88
6700 AB Wageningen
The Netherlands
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The Centre for Development Innovation works on processes of innovation and change in the areas of food and nutrition security, adaptive agriculture, sustainable markets, ecosystem governance, and conflict, disaster and reconstruction. It is an interdisciplinary and internationally focused unit of Wageningen UR within the Social Sciences Group. Our work fosters collaboration between citizens, governments, businesses, NGOs, and the scientific community. Our worldwide network of partners and clients links with us to help facilitate innovation, create capacities for change and broker knowledge.

The mission of Wageningen University & Research (Wageningen UR) is 'To explore the potential of nature to improve the quality of life'. Within Wageningen UR, nine specialised research institutes of the DLO Foundation have joined forces with Wageningen University to help answer the most important questions in the domain of healthy food and living environment. With approximately 30 locations, 6,000 members of staff and 9,000 students, Wageningen UR is one of the leading organisations in its domain worldwide. The integral approach to problems and the cooperation between the various disciplines are at the heart of the unique Wageningen Approach.

