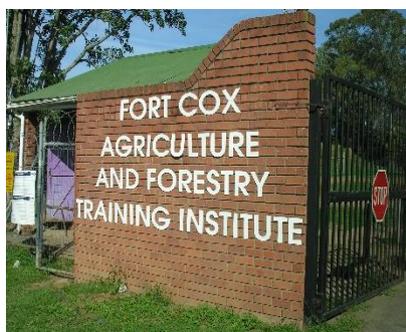


Consultative Symposium Excerpts

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Contents

1. Introduction.....	1
2. The process of curriculum development (or review)	2
2.1. Evaluating the current curriculum.....	2
2.2. Planning of curriculum review.....	2
2.3. Curriculum review validation	2
2.3.1. Stakeholder groups (present)	3
2.3.2. Stakeholders groups (absent)	3
2.4. Organising content and implementation	3
3. Some Reflections from the consultative process	3
4. Demonstration sites.....	4
5. Visit to small scale farmer (Debenek).....	5
6. Initiatives (evolving from the symposium)	5
7. Conclusion	6

1. Introduction

Fort Cox Agriculture and Forestry Training Institute (FCAFTI) is a vocational training institute which majors in four agricultural specialty areas namely Crop Production, Animal Production, Agribusiness, and Forestry offered mostly at diploma level (NQF level 6). In keeping with its curricula related policies, FCAFTI is required to conduct extensive consultations with industry stakeholders whenever curricula are developed, reviewed or updated. As such, FCAFTI is obliged to update its curricula on a yearly basis and review them every five years. The updating and review processes serve to ensure that the curricula remain relevant and responsive to the ever changing trends in the agricultural industry.

The purpose of the consultative symposium was to review curricula of the existing diploma programmes for Crop Production and Agribusiness, while at the same time help in developing

a curriculum for a proposed advanced diploma programme. While consultation would have been conducted only with local stakeholders from the industry, organisers of the event sought to take advantage of a scheduled VET4.0 visit to South Africa which had potential to introduce some international perspective to the curriculum development and review process. As such the two events were synchronised and happened on the 27th of January 2020.

2. The process of curriculum development (or review)

2.1. Evaluating the current curriculum

Evaluation of the FCAFTI curricula takes several forms but the main feedback loop is completed by the Curriculum Advisory Board which meets once every year for purposes of updating or reviewing the curriculum. The second method is through feedback reports from employers where students attend their work integrated learning (WIL) which is undertaken for the period of six months. During this period, students are placed in farms according to their specialty areas. At the end of the six months, mentors provide the institute with an evaluation of the students' performance through a semi-structured questionnaire within which, among other things, the mentor is required to identify gaps in the curriculum. The third avenue for evaluating the curriculum is through the external moderators for examinations who are at liberty to propose changes and give feedback on curriculum content. Additionally, students are given an opportunity at the end of every course, to evaluate the course in terms of facilitation methods, content, time taken for lecturers to provide feedback to students. Other feedback loops include guest lectures and industry education excursions which provide a synopsis of industry trends with respect to emerging technologies and production methodologies. The institute further embarks on graduate tracking to assess whether or not the graduates are getting employed within two years of graduating from the institute and if employed, the type of work that they are engaged in. This is done through the use of questionnaires administered telephonically.

2.2. Planning of curriculum review

Subject specialist for the respective courses develop content and learning experiences by proposing changes to the existing curriculum and incorporating the needs identified. The specialists propose the objectives, anticipated learning outcomes, themes or concepts to be covered (content), the assessment methods and means and processes for student feedback. Specialists are required to do some preliminary consultations even at this stage.

2.3. Curriculum validation

At this stage the proposed curriculum is subjected to scrutiny at a much wider scale by stakeholders which include the students, the industry representatives and academics from within and without the institute. The proposed curriculum is evaluated in terms of its feasibility, relevance, responsiveness to the prevailing industry trends, vertical and horizontal integration of content, expected student learning experiences and the available learning platforms. Figure one below shows the stakeholders deliberating on the curriculum during the symposium.



Figure 1: Various stakeholder groups validating curricula during symposium

2.3.1. Stakeholder groups (present)

Stakeholders of the FCAFTI curricula that attended the symposium are listed below:

1. University of Fort Hare
2. Rhodes University
3. Department of Agriculture, Forestry and Fisheries (DAFF)
4. Department of Rural Development and Agrarian Reform (DRDAR)
5. Riverside citrus
6. AGRI SA
7. Citrus academy
8. Old mutual Agribusiness
9. Zingisa Educational Project (NGO)
10. Representatives from the Smallholder farmers
11. Commercial farmers (citrus)
12. Imvotho Bubomi Learning Network (IBLN) members
13. Agricultural Extension officers
14. International guests (Nottingham University (UK) and Gulu University (Uganda)- under the VET 4.0 research project)

2.3.2. Stakeholders groups (absent)

The following members of the board were invited but did not turn up for the event: _

1. Dohne Agricultural Research Institute
2. Corteva Agri-Science
3. Eastern Cape Rural Development Agency
4. Practical training solutions
5. Food SA - Eastern Cape
6. Bukhosi Consulting
7. Quality Council for Trades and Occupations (QCTO)
8. Water Research Commission (WRC)
9. Commercial farmers (Pineapple and Avocado farmers)

2.4. Organising content and implementation

In consideration of the feedback at validation by stakeholders, the curriculum is finalised by way of incorporating the feedback accordingly. Particular attention is paid to sequence and integration of content at this stage. The final curriculum document is then published in the institute's prospectus.

3. Some Reflections from the consultative process

- It is important to define the graduate the institute aims to produce as this will inform the courses that the students will have to study.
- Most crop production courses were relevant, except the enrichment of the content to encompass new technological developments such as climate-smart agriculture.

- Entrepreneurship course to be strengthened to provide income generating opportunities for graduates in the face of high youth unemployment i.e. alumni and industry can be made to play important roles in the delivery of this module. Institutional policies and processes to be revised to enable effective practical implementation of the entrepreneurship module
- The content should also include the traditional farming practices used in communal areas where the majority of learners reside.
- Agribusiness modules were sufficient in terms of number and content. Similarly, the crop production electives and animal production electives were adequate, however; animal nutrition must be included.
- Content for some engineering courses needs to be downscaled in order to give way to depth during offering
- Curricula not quite responsive to the fourth industrial revolution standards (digitisation, robotics, remote sensing)
- Need for coverage of climate smart technologies (solar energy, wind energy, biogas energy) in some of the engineering courses.
- Need to include an environmental sustainability course seen as critical and requiring immediate attention.
- Emphasis on enriching the extension module exerted.
- The extension of WIL to one year viewed as noble, however; the practical component should be strengthened to reinforce theory.
- Stronger partnerships with industry required to ensure currency of content on a rapidly changing technological and legislative front.
- Practical competencies during assessment of work integrated learning (WIL) should be measured and therefore judgements of workplace supervisors should be valued.
- Need for devising strategies to increase the community outreach footprint.
- The purpose of vocational training was defined as having to ensure relevance to the future, able economic innovation and ensure environmental education.
- Overall, curricula tend to focus on large scale commercial production practices which are highly mechanised but have limited employment opportunities in the South African context. Dual farming systems existing in SA should form part of curricula instead i.e. emerging and smallholder farming should be offered together with large commercial scale farming.

4. Demonstration sites

Since the training that FCAFTI carries out is vocational in nature, its curricula provide various opportunities for hands-on practical activities which vary according to specialty areas. One aspect of the crop production curriculum zoomed in on during the symposium pertains to water harvesting and conservation for which certain demonstration sites have been erected for training purposes. During the symposium, a few of the demonstration sites were visited namely the greywater harvesting & processing, the agro-ecological practices where vegetables are grown in fertility trenches coupled with mulching, demonstration farm pond for harvesting runoff from rain water (missed due to time constraints). Figure 2 below shows some of the demonstration sites established at the institution.



Figure 2: Greywater harvesting and filtration – demonstration site



Figure 3: Agro ecological practises - demonstration site



Figure 4: The farm pond rainwater harvesting technique - demonstration site.

5. Visit to smallscale farmer in Xhukwana village

The visit was conducted at small-scale farmer's homestead who is a member of Imvotho Bubomi Learning Network (IBLN). The farmer harvests rain water for homestead vegetable gardening. The garden is located in the farmer's backyard which is situated on a slight slope. The farmer has constructed trenches and diversion furrows from the upper side of the garden. He then floods the trenches and diversion furrows with water which diffuses down the slope to the lower section of the garden. In addition, the farmer practices mixed cropping where some of the crops are ground covers to conserve moisture and reduce weed infestation in this case the farmer used pumpkin (*Cucurbita maxima*) and indigenous bitter watermelon (*Citrillus lanatus* subsp. *Lanatus*) locally called "ntyabonty" as ground covers. Other vegetables used in the mixed cropping were beans (*Phaseolus vulgaris*), potatoes (*Solanum tuberosum*) as well as a mixture a sweet and chilli peppers (*Capsicum spp.*) spring onions (*Allium fistulosum*), carrots (*Daucus carota*) and Swiss chard (*Beta vulgaris*). In addition the farmer uses some plants that deter pests from attacking the vegetables such as nasturtium (*Tropaeolum majus*) and marigolds (*Tagetes erecta*). The indigenous bitter watermelon is grown for sale to a women cooperative which further processes it into jam. The rest of the produce is generally grown for family consumption and only sold to members in the community in case there is surplus.

6. Initiatives (evolving from the symposium)

For a sustained enhancement of the FCAFTI vocational curricula, the following initiatives have been proposed for implementation in the near future:-

- Fort Cox to partner with Nottingham University's faculty of agriculture for the exploration of opportunities in curriculum advise, research projects, staff exchange programs etc.
- A research project for optimising the quality of students who get admitted into Fort Cox has been proposed and will be conducted in collaboration with Rhodes and Nottingham University where local and international perspectives shall be sought for purposes of the research project.

- Fort Cox to consider visiting Gulu university to explore opportunities for further collaboration.

7. Conclusion

The symposium was a great success given the wide array of stakeholder groups that managed to turn-up for the event. Buoyed by the presence of international guests, stakeholders managed to deposit a wide range of perspectives into the process. While these were left to the discretion of FCAFTI to implement, the better part of the perspectives have started getting implemented across the various curricula. It is however regrettable that a significant number of stakeholder groups did not turn up for the event due to diverse constraints but efforts have been made to try to tap into their input by other means. There remains room for improvement in the planning, organising, coordination and supervision of the curriculum development and review processes if a higher level of quality is to be achieved in the next round.