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GFRAS GOOD PRACTICE NOTE FOR EXTENSION AND ADVISORY SERVICES

NOTE 28: Rural Advisory Services Curriculum Development

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Introduction

The landscape of agricultural development has changed dramatically in the past two decades, calling for transformation of the curricula of programmes, courses, and training related to agricultural extension and rural advisory services (RAS) in terms of what is taught, and how. Many higher learning institutions and training providers recognise the need to review and change their existing curricula and/or to develop new ones that are responsive to current market demands. However, there is often limited know-how and capacity to implement successful processes of curriculum development, especially in the extension and RAS community.

This note describes a structured process of curriculum development in the context of extension and RAS. The experience of the Global Forum for Rural Advisory Services (GFRAS) in developing the New Extensionist Learning Kit[1] is presented as an example of this process at global level. Other cases are used to bring out the national-level experience consolidating the lessons learned.

Philosophy and principles

Philosophy provides a framework for decision-making and organising the curriculum development process. It is about asking questions around the purpose of learning, how the students learn, what methods and materials to use, and the process of teaching and learning, among other issues.

Although traditionally many curricula have been predominantly technical, today there is a call for the integration of technical and functional skills.

- **Technical skills** – also known as hard skills – are associated with the abilities and knowledge needed to perform specific tasks. They are practical and often relate to mechanical, information technology, mathematical, or scientific tasks.
- **Functional skills** – also known as soft skills – comprise a broad category of personal attributes and interpersonal skills that enable us to interact with others. Functional skills can be related to self-management in the sense of helping an individual manage their own emotions, perceptions, and reactions. They may also include the people skills required to interact with others in a given field or workplace. Functional or soft skills are cross-cutting as they are relevant across different fields and sectors.

In the 21st century, the RAS curriculum should be influenced by contemporary and progressive philosophies that emphasise the integration of functional skills to address more complex issues of a social nature (Box 1).

What is a curriculum?

"In a theoretical sense, curriculum refers to what is offered by the school or college. However, practically it has a wider scope, which covers the knowledge, attitude, behaviour, manner, performance, and skills that are imparted or inculcated in a student. It contains the teaching methods, lessons, assignments, physical and mental exercises, activities, projects, study material, tutorials, presentations, assessments, test series, learning objectives, and so on."[2]

A **curriculum** is broader than a course and a syllabus. It is an aggregation of courses and provides a bigger picture. A **course** is a set of lectures that can consist of any type of content. Different courses contribute to a curriculum. A **syllabus** is a descriptive outline and summary of topics to be covered in an educational or training course.[3] It helps students to know about a subject in detail, why it is a part of their course of study, and what will be expected from them.

1 www.g-fras.org/en/157-the-new-extensionist
2 Surbhi, S. 2015. Difference between syllabus and curriculum: Comparison chart. Key Differences. http://keydifferences.com/difference-between-syllabus-and-curriculum.html#ComparisonChart
3 Anon. 2017. Difference between syllabus and curriculum. Difference Between: Descriptive Analysis and Comparisons. www.differencebetween.info/difference-between-syllabus-and-curriculum

BOX 1: PHILOSOPHICAL CONSIDERATIONS

- **Intellectual emphasis:** Not training and disciplining the mind, but rather engaging learners in problem-solving activities, unleashing creativity and thinking outside the box.
- **Educational process:** Should be viewed not as rigid instruction, but as a creative self-learning process where learners reconstruct knowledge. Education should be learner-centred.
- **Curriculum content:** Should address learners holistically in relation to knowledge, attitude, and skills.
- **Learners:** Are not homogeneous empty vessels, but a heterogeneous group able to think and relate issues to their own real-life experience.
- **Teachers:** Are not subject authorities, but facilitate learning and create space for students to learn on their own. Teacher–student dialogue is important.

It contains general rules, policies, instructions, topics covered, assignments, projects, test dates, and so on. A subject syllabus is a unit of the curriculum.

Curriculum development can therefore be understood as a systematic process of framing the context within which learning takes place; what needs to be taught and learned (content); how it should be delivered (teaching–learning methods and tools); how it is assessed (examinations); and what resources may be used (materials to deliver and support teaching and learning). It is an interactive and cyclical process that involves a considerable amount of negotiation among stakeholders with different interests to reach a consensus on what defines a complete curriculum.

How, who, what, why?

The principles important in determining the choice of emphasis in curriculum development are:

- know how – process or practical knowledge
- know who – communication
- know what – facts
- know why – science.

Understanding these principles will help to influence choices about what content needs to be taught, how it is delivered, and how it is assessed.

Modes of delivery influencing curriculum development

The delivery mode is important to curriculum development because it will influence the writing style, packaging format, and nature of activities.

- **Face-to-face** courses usually involve the instructor and learner being in the same room.
- **Self-directed** study involves the learner facilitating their own learning, for example through web-based online courses or long-distance learning.
- **Blended courses** (also known as hybrid or mixed-mode courses) combine traditional face-to-face instruction with long-distance or web-based learning. Blended learning is a student-centred approach to creating a learning experience whereby the learner interacts with other students, with the instructor, and with the course content through thoughtful integration of online and face-to-face environments.

Implementation

Curriculum development generally follows an iterative process involving a wide range of stakeholders, negotiation of interest, and reaching consensus on the content and process. Common steps include the following.

- **Situation analysis:** Review existing curricula, national standards, market research, needs assessments, and stakeholder mapping in the context of curriculum development.
- **Curriculum planning:** Define the required core competencies to be addressed by the curriculum; define intended goals, objectives, and target audience; determine curriculum content, themes to be covered, and overall process to be followed; develop a teaching and learning approach and assessment strategy.
- **Selection of learning mode and delivery system:** Determine the mode of delivery of the curriculum.
- **Content generation:** Determine the mode of production of the material (e.g. writeshops, engaging experts). Generate structured sets of learning objectives and outcomes. Organise, structure, or sequence the content and/or learning experience. Determine what to assess/evaluate and the assessment criteria.
- **Establishment of a curriculum library:** Collate resource materials for use during the curriculum development process and as reference materials for learners. Resource materials could include publications, articles, videos, and links to online material.
- **Technical writing, editing, and quality assurance:** Determine whether content production will be best done by content experts, or by professional writers who have some understanding of the issues at hand.
- **Testing, piloting, and validation:** Test for feedback and validation before finalising the curriculum.
- **Accreditation, registration, and approval:** Consult the relevant institution. Many countries have bodies that oversee accreditation of curricula and training programmes (e.g. the National University Commission in Nigeria).

Boxes 2 and 3 present two examples of implementing curriculum development processes.

Capacities required

The success of any curriculum development process is anchored in coordination of the different activities leading to the final products. This requires the ability to identify experts, manage the participation of different stakeholders in the various stages of the process, and keep up the momentum. When organising writeshops, facilitation capacity becomes crucial in guiding the discussions and leading the process towards a common goal. A facilitator needs to understand the curriculum development process and to guide the writers.

The quality of any curriculum stands or falls with the content specialists. There is a need to identify relevant content experts/specialists who are not only competent in the subject matter, but also up to date with emerging trends. Content experts are not necessarily experts in technical writing.

BOX 2: DEVELOPMENT OF THE NEW EXTENSIONIST LEARNING KIT – SOUTH AFRICA

Situation analysis: GFRAS developed a document detailing the role extension plays in agricultural innovation systems, and the strategies and capacities needed at individual, organisational, and system levels.[4] Engaging different experts within the network, GFRAS reviewed existing curricula in a number of institutions worldwide.

Identification of core competencies: Through a consultative process with a wide range of stakeholders, the GFRAS Consortium came up with a set of 13 core competencies for individuals from around the world to fulfil the role of the New Extensionist.[5] GFRAS embarked on the process of developing learning materials for the core competencies defined. These make up the New Extensionist Learning Kit.

Content generation: GFRAS convened two writeshops in 2015 and 2016 with 20 content specialists to develop learning modules of the New Extensionist Learning Kit. Bringing the content experts under one roof was crucial for a collective understanding of the bigger picture, ensuring cross-referencing across the different modules. The content experts generated the outlines, learning outcomes, and content for each of the modules, and collated relevant resource materials to build up a curriculum library. An experienced publishing company was contracted to write the modules as well as for the design, layout, and editing of the module, working closely with content specialists for feedback and quality assurance.

Testing and interface with people on the ground: Once the module drafts were completed, there was a need to test and solicit feedback from people on the ground. This included reviews of the module outlines, testing the modules, and feedback on both content and process. The testing was done by individuals and groups through face-to-face workshops and/or long-distance self-directed learning. Different actors across the GFRAS global network were involved in testing and validating the different modules.

BOX 3: ACCREDITATION AND REGISTRATION OF AN ACADEMIC CURRICULUM – SOUTH AFRICA[6]

Application for programme accreditation (candidacy phase)
In South Africa, institutions wishing to offer new academic programmes are required to submit an application for accreditation to the Higher Education Qualification Council (HEQC).

The programme accreditation application is evaluated against the criteria for programme input: programme design, student recruitment and selection, staffing, teaching and learning strategy, assessment policies and procedures, infrastructure, library and resources, and administrative services.

The institution submits a plan for implementation of the programme. This plan should specify implementation steps for the new programme, including time frames and budgetary allocations, human resources for managing implementation, and the required infrastructure. Institutional strategies are needed to ensure the HEQC's criteria for programme progress, outputs and impact, and review are met in the accreditation phase of the new programme.[7]

An HEQC panel of peers evaluates applications for new programmes. They may also undertake a site visit if necessary. If the requirements for candidacy status are met, the HEQC will award provisional accreditation to the new programme.

Mid-term progress report
Mid-way through the programme, the institution submits a progress report for evaluation by the HEQC.

Accreditation phase
Within one year of the first cohort of students graduating from a new programme, the institution submits an application to the HEQC for accreditation. The institution must demonstrate that it has met the conditions set by the HEQC during the candidacy phase, which include conditions relating to evaluation of the mid-term report from the institution. The institution is also required to conduct a self-evaluation of the programme using the HEQC's criteria for the accreditation phase, which include those for programme input, process, output and impact, and review.

If the submission is approved by the HEQC, the programme gains accreditation status.[8]

Technical writers are responsible for writing, layout, editing, and quality assurance of the final products. This may also be done by education or learning experts who know how to structure the text in an appropriate format with activities that people can learn from.

A wide range of stakeholders need to be involved in testing the modules before finalisation. The more diverse the group, the better, as this brings different perspectives. Gender considerations are also important (see Box 4). The feedback received needs to be incorporated to improve the final product. Accreditation of training programmes requires special expertise, and will differ from country to country.

Costs

Curriculum development requires different types of expertise throughout the process from situation analysis to final product. The different stages require not only human

[4] Sulaiman, R. and Davis, K. 2012. The 'New Extensionist': Roles, strategies, and capacities to strengthen extension and advisory services. GFRAS Position Paper. Lindau, Switzerland: GFRAS. www.g-fras.org/en/activities/the-new-extensionist.html
[5] Davis (2015) Op. cit.
[6] For further information on the accreditation and registration process in South Africa, contact Nalize Scheepers at Pedagogix (www.pedagogix.co.za)
[7] CHE. 2004. *Criteria for programme accreditation*. Pretoria: Council on Higher Education, Higher Education Quality Committee. www.che.ac.za/sites/default/files/publications/CHE_accreditation_criteria_Nov2004_0.pdf
[8] For more information contact the South African Qualification Authority: www.saqa.org.za/list.php?e=Guidelines

BOX 4: GENDER CONSIDERATIONS

Gender sensitivity is important in curriculum development. Learning should be suitable for both male and female learners, and the skills emphasised should draw attention to gender disparities, stereotypes, and other constraints experienced in the field. When selecting experts for curriculum/ content development, gender balance should also be considered in order to gain a balanced perspective.

resources, but also financial inputs. These will depend on the level (national or local), scope (number of courses to be developed, mode of delivery), and activities (writeshops, technical writing, testing, monitoring and evaluation).

The GFRAS New Extensionist Learning Kit, with 13 modules, was developed at the global level, and the activities incurring costs included: situational analysis, stakeholder workshop, writeshops, technical writing, and testing. The actual writing, typesetting, and editing is estimated to cost US$2,000–5,000 per module.

Strengths and weaknesses

Different options for curriculum development each have their own strengths and weaknesses. Finding a good mix of options while maintaining maximum quality is important. For example, omitting market analysis or testing due to cost-cutting runs the risk of producing irrelevant material. It is important to understand the environment and determine what make sense for that context.

Best-fit considerations

Developing a curriculum at the global level has the highest potential to reach large-scale audiences, but runs the risk of not being specific enough. The legitimacy of the institution leading the curriculum development process is crucial for credibility and the quick adoption of the process and products.

Global-level curricula require more advocacy effort, without which trickling down to local level could be a challenge. Global-level products also require translation into different languages, and further development to suit local contexts, all of which will require additional resources. At the national level, an enabling policy environment and allocation of resources are crucial for effective curriculum development.

Governance

Coordination of the curriculum development process is crucial. In the GFRAS case, coordination at global level entailed managing participation of context specialists and technical writers, organising writeshops, facilitating testing workshops, and monitoring and evaluating the process.

At the national level, coordination follows similar processes. Monitoring and evaluation is very important to keep track of inputs and outputs at various stages of the process. As in the South African case (Box 3), an accreditation system as well as universities and national regulatory systems play a critical role in governance and quality assurance.

Evidence of impact, sustainability, and scalability

There is evidence of increasing demand for online training programmes for RAS. The Food and Agriculture Organization of the United Nations has a long history of using online learning materials for agricultural extension.[9] In India, the National Institute of Agricultural Extension Management (MANAGE) implements a postgraduate diploma in agricultural extension management (PGDAEM) using massive open online courses (MOOCs);[10] and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) offers MOOCs through the National Virtual Academy for Indian Agriculture.[11]

Demand for the New Extensionist Learning Kit is growing, from GFRAS network partners and beyond. Between June 2015 and May 2017 over 2,000 people were exposed to the kit through testing and/or training, and the feedback received is encouraging. Some universities have adopted some of the modules for integration into existing programmes e.g. in South Africa, Sierra Leone, and the Philippines.

This paper has been compiled by Hlamalani Ngwenya of the University of the Free State and Mercy Oluwayemisi Akeredolu of Sasakawa Africa Fund for Extension Education (SAFE) with assistance from Nalize Scheepers of Pedagogix, with financial support provided by the agencies with the logos below.

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Acknowledgement:
The special contribution on the accreditation of programmes (Box 3) was written by Nalize Scheepers, a director and principal consultant at Pedagogix (Pty) Ltd. Pedagogix is an independent consultancy offering specialised services to support academic planning, with specific reference to the development and implementation of education and training programmes, curriculum design and teaching, and learning support material at multiple levels in the education and training sector.

Correct citation: Ngwenya, H. and M.O. Akeredolu. 2017. Rural Advisory Services Curriculum Development. Note 28. GFRAS Global Good Practice Notes for Extension and Advisory Services. GFRAS: Lausanne, Switzerland.

[9] Oakley, P. and Garforth, C. 1997. *Guide to extension training*, 5th ed. Rome: Food And Agriculture Organization of the United Nations, ch. 2. www.fao.org/docrep/t0060e/T0060E03.htm

[10] MANAGE Post Graduate Diploma in Agricultural Extension Management (PGDAEM). www.manage.gov.in/moocs/prospectus.pdf

[11] ICRISAT. 2014. Massive open online courses for agricultural professionals to usher in classrooms without boundaries. Press release. Patancheru, India: International Crops Research Institute for the Semi-Arid Tropics. www.icrisat.org/newsroom/news-releases/icrisat-pr-2014-media27.htm

Supported by

german cooperation DEUTSCHE ZUSAMMENARBEIT

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH