

EQUIP3 YouthICT

Information & Communications Technology



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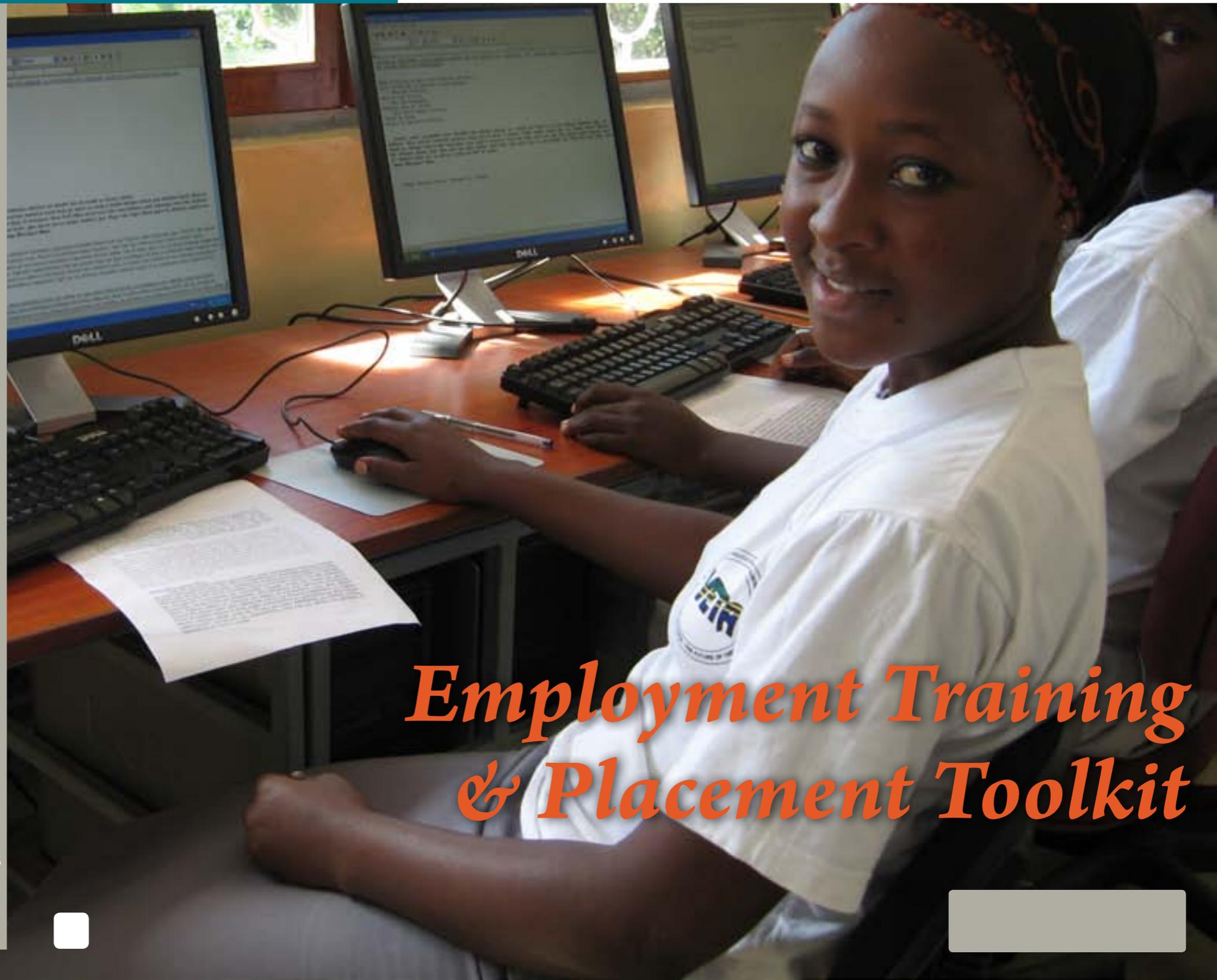
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*Employment Training
& Placement Toolkit*



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ACP-EU: African, Caribbean and Pacific countries and the European Union Development Corporation.

ACWICT: African Center for Women and ICT-a training institute for women located in Nairobi, Kenya.

AGMARK: Kenya's Agriculture Market Development Trust; a Kenyan organization that supports the development of markets for agricultural inputs, outputs and services for smallholder farmers.

Agribusiness: Businesses focused on agricultural services and products.

Agricultural Cooperative: A business or organizational owned and operated by a group of farmers for their mutual benefit.

Agroforestry: Land use practices when crops and/or animals are integrated with forested areas.

AIDS: Acquired Immune Deficiency Syndrome

AMREF: African Medical and Research Foundation

BAI: British American Insurance

BPO: Business Process Outsourcing, the contracting out of specific business functions to a third-party service provider.

CNEA: Citizens Network for Foreign Affairs

DDD standards: Detailed Design Documents; used for web page design.

ECDL/ICDL: European Computer Driving License; a globally recognized information and communication technology (ICT) and digital literacy qualification.

E-commerce: Electronic commerce; the buying and selling of products or services over electronic systems.

E-Health: The use of information technology and communication devices, such as computer and telephones in health service delivery.

EHR: Electronic Health Records-a digital record of patient data in the health field.

FOSS: Free and open source software

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GTC: German Technical Cooperation

GIS: Geographic Information System; a digital system used to capture, store, and analyze data on geographical areas

FAO: Food and Agriculture Organization of the United Nations.

HIMS: Health Information Management Systems

HIV: Human Immunodeficiency Virus

HTML: Hypertext Markup Language

ILO: International Labour Organization

IFOAM: International Federation of Organic Agriculture Movements'

ISBI: The Informal Sector Business Institute at Strathmore University located in Nairobi, Kenya.

JHPIEGO: An international non-profit health organization affiliated with John Hopkins University based in Baltimore.

KIOA: Kenyan Institute of Agriculture

M-Agriculture: Agricultural services and information dissemination using mobile devices such as mobile phones and other wireless enabled device

M-PESA: Mobile-phone money transfer service

NICI: National Information and Communication Infrastructure strategy of Rwanda

NFIS: National Farmers Information Service; a voice information service intended to serve farmers.

OIE: World Organization for Animal Health

OER Africa: Open Educational Resources, Africa. A Nairobi based organization that promotes open educational resources.

PENHA: Pastoral and Environmental Network in the Horn of Africa

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PRIDE: Poverty Reduction through Information and Digital Employment is Rockefeller Foundation's program to support the development and testing of impact sourcing business models, such as call centers.

RCA: Rwanda Cooperative Agency

SME: Small Micro-Enterprise

SMS: Short Message Service; a text message application on most mobile phones.

SMC-PAU: School of Media Communications –Pan African University

SQL: A programming language used in database management systems.

TB: Tuberculosis

USAID: United States Agency for International Development

WHO: World Health Organization

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BACKGROUND

EQUIP3 assessed the labor markets and consulted with numerous stakeholders in Kenya and Rwanda to identify viable youth livelihood opportunities in three sectors: information and communications technology (ICT), agriculture, and health. By gathering quantitative and qualitative information on the needs, interests, and capacities of employers, youth, and others, these assessments identified specific occupations in these three sectors that offer significant entry-level employment or entrepreneurial opportunities for disadvantaged youth in the target countries. The opportunity profiles presented in this toolkit are a direct result of these country assessments. (For more information, see the assessment summaries for Kenya and Rwanda appended to this guide.)

Information and communications technologies are powerful tools with which to increase productivity and service delivery in Africa and other developing economies. The country assessments in Kenya and Rwanda found numerous employment and entrepreneurial opportunities for youth who have basic to advanced ICT skills, such as in hardware maintenance and repair, network management, multimedia production, and database management. ICT skills can also enhance youth employment opportunities in the agricultural and health sectors. In the agricultural sector, for instance, youth can use ICT skills to increase the efficiency of farms, shops, and suppliers. In the health sector, opportunities for youth exist in supporting health management information systems, among other opportunities.

AUDIENCE

This toolkit is primarily for program managers in institutions that deliver employability or entrepreneurship training and services targeting youth Africa. Motivated youth who are seeking employment or entrepreneurship opportunities may also use this toolkit to better understand the minimum qualifications needed and how they can access training resources either through training providers or on their own.

PURPOSE

EQUIP 3 aims to empower local partners to successfully implement youth employability programs. We have developed this toolkit to provide guidance and support to partner institutions in the design of these programs. The toolkit presents profiles of jobs in three sectors—ICT, health, and agriculture—which were identified as growth industries with a high potential for employing youth. Each opportunity profile provides program managers with detailed information on how to establish training programs that will impart to youth the skills required to secure formal employment or to start their own businesses. Each profile includes the following information:

- Brief job description
- The employment outlook
- The “big picture” training considerations
- Desired training outcomes
- Student prerequisites for training

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- Qualifications to look for in trainers
- Specific curriculum and resources
- The technology resources needed to provide training
- Optimal instructional methodologies
- Internship and job placement strategies
- Additional resources, including links to online resources

KEY FOUNDATIONAL SKILLS

Increasingly, educators, employers, and policymakers are finding that in order for young people to succeed in today's rapidly changing and globalized world, they need an educational foundation that includes more than just academic and technical skills. Youth need comprehensive, integrated employability training to motivate them to succeed and to fully prepare them for work. At-risk or vulnerable youth may need additional support services. Such training approaches must supplement the instruction of technical subjects with training in life skills and other basic competencies such as basic computer skills, English language skills, and entrepreneurial skills.

Integrated employability training provides a variety of skills training. In addition, it makes intentional and meaningful linkages between these skills so that training effectively balances the needs and interests of youth with the skills required by the local labor market. By developing training programs that directly respond to local employment conditions, integrated training programs present viable ways to correct the skills mismatch that frequently impedes youth employment.

For more information on curricula for the key foundational skills listed below, please refer to P4Work (<http://www.preparing4work.org/>). This Web site houses peer-reviewed training curricula on work-readiness, technical skills, life skills, and entrepreneurship.

Life Skills

For the past 30 years, educators have been developing and implementing life skills curricula for young people. Youth critically need life skills to become motivated and confident decision-makers who can overcome adversity and realize their potential. Life skills have been shown to help youth do better in school, make healthier decisions, be more prepared for work, and engage in civic life. An effective life skills program will balance the development of knowledge and skills. As participants gain knowledge and practical skills, they will develop confidence in their abilities to make healthy, effective choices.

As part of an employability program, life skills training should equip youth with a range of skills that will help them stay in school and acquire the education, professional skills, employment readiness, and confidence they need to succeed in life and in the workplace. Effective life skills curricula typically provide skills training in these five core competencies:

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- **Personal Competencies** — skills include goal setting, listening, developing confidence, and respecting others
- **Problem Solving and Conflict Management Skills**
- **Healthy Behaviors** — topics may include gender equality, substance abuse, violence, and general health
- **Effective Work Habits** — skills may include interviewing skills, communication, time management, respecting authority, and worker's rights
- **Service Learning** — skills may include making connections in the community, assessing community needs, and planning a community service project

Basic Computer Skills

Information and communications technology skills are increasingly fundamental for workers beyond the ICT sector. Youth seeking employment in industries once considered lower skilled and lower wage now need ICT skills to enhance their employability. Healthcare and agriculture are examples of industries in which the incorporation of ICTs into the workflow has raised the level of skills required for employment. However, as important as basic ICT skills training has become, it is only part of the answer to job preparation and employment.

ICT training is most effective when it is connected to a larger array of services and coordinated with other offerings. Implementing organizations must consider not only what an ICT skills training track will look like, but also consider how it can be linked to technical job skills, life skills, and job placement services to create an integrated and unified program. For example, a program that trains participants to use computers to conduct a job search, prepare a CV, and write a cover letter is making intentional connections to job placement services. If these ICT-related skills are in English, then meaningful linkages are also being made with English curriculum without that being the focus of the training.

ICT skills are almost never the missing link that miraculously transforms employment prospects. Disadvantaged youth typically face multiple barriers and constraints, many of which are more complex than unfamiliarity with email or word processing. ICT literacy cannot be isolated from larger social and personal contexts. Technical and life skills as well as solutions to challenges faced by youth entering the workplace—such as gender disparities, substance abuse, and hazardous work conditions—are important. The hurdles are diverse and individualized, and ICT must be integrated into this larger context of needs and skills to credibly advance employability.

Relevant basic ICT training includes the International Computer Driving License (<http://www.icdl.org.za/centres.php>) and Microsoft's Digital Literacy training, Microsoft Unlimited Potential, and Cisco IT Essentials, which can be easily accessed by qualified NGOs at no cost. For practicing typing and data entry skills, several free online tutorials are available: Basic Keyboarding, Typing Test, and Typing Speed Certification.

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English Language Skills

In today's global labor market, English language skills are fundamental for workers across a broad spectrum of industries. Limited English proficiency is now widely recognized as a critical challenge facing disadvantage youth, which may impede their ability to improve their employment prospects and increase their earnings. Integrating English language skills into an employability training program can therefore provide a valuable asset to participants and increase opportunities for employment.

English language training is most effective when it is connected to a larger array of trainings and contextualized to meet local labor market demands. Due to the fact that learning a foreign language can take many years, it is essential that implementing organizations design an English training that responds to both the skill level of the youth participating in the program as well as to the industry targeted to employ program graduates. For example, if youth participants have only limited English and the jobs targeted by the program require a significantly higher level, then the program must provide training that addresses and corrects this skills mismatch. Similarly, the program must address the type of English required by the market. If youth are receiving technical training for employment as call center agents, for instance, then the training must be tailored to teach customer service language skills. It is also important to consider how the language training is linked to technical job skills, life skills, and job placement services to create an integrated program. For example, a program that trains participants in specific life skills such as effective communication and leadership may make intentional connections to the language training by providing these skills in English.

At the same time, entry-level jobs or entrepreneurial opportunities may require that youth possess advanced skills in the language used predominantly by local businesses instead of or in addition to English.

As is the case with ICT skills, English language skills are not, by themselves, the single critical element required for employment. Marginalized youth face multiple barriers and constraints in their quest for work, of which language skills may only be part of the challenge. As such, English skills cannot be isolated from the other technical and life skills demanded by the local labor market.

Entrepreneurial Skills

In many economies around the world, the most viable option for a decent livelihood for youth is self-employment. In these economies, formal sector employment is limited or non-existent; therefore, job creation through entrepreneurship is the best option for youth who are entering the job market. Entrepreneurship training meets the growing need for job creation by helping young men and women develop the constellation of skills they need to launch and sustain new enterprises.

Entrepreneurial training is appropriate for young people who show an aptitude for and interest in starting their own business, as well as for youth who live in areas with an unstable formal economy or an established informal economy. Young people, whether or not they are able

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to start and sustain a business, gain valuable skills through entrepreneurship training that they can use throughout their lives. They graduate from entrepreneurship training programs equipped with:

- Business management skills
- Leadership and management skills
- Networking experience
- Knowledge about money and financing
- Confidence

CROSS-CUTTING THEMES

In addition to the foundational skills described above, the design of a youth training program should take into consideration cross-cutting themes that allow beneficiaries to receive targeted and relevant interventions. Therefore, any list of local opportunities and the programs designed to prepare youth for those opportunities should be based on recent data on local employer and youth needs, a consideration of gender integration, and attention to monitoring and evaluating program outcomes and impacts.

Client Assessments

The overall impact and long-term success of a youth-focused employability training program depends in large part on how well it responds to the needs of its two primary clients: youth and employers. This dual-client approach analyzes both the demand (employers and market) and supply (youth) sides of the equation in order to understand what employers want in new hires and to design programs that give youth the training to meet those needs.

Local market conditions directly influence the outcome of job training programs and must be considered early in the design stage. Factors that affect these conditions include employment trends by industry, immediate and projected staffing needs, labor laws, and planned public or private investments. Data collection activities, including conducting surveys and building relationships with the government and private sectors are therefore an important first step. Close relationships between training entities and employers also help youth find jobs and increase opportunities for on-the-job-training and internships.

Youth participation in an employability program can significantly affect program outcomes. Training programs must therefore undertake a thorough assessment of the needs and skills of target beneficiaries early in the planning phase in order to ensure that the training responds to the interests of youth and has the greatest potential to reach, retain, graduate, and place target beneficiaries.

Gender Integration

Gender integration or mainstreaming is an important factor to consider when providing youth employability programs. It involves analyz-

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ing potential inequalities and differences between male and female participants and then making decisions about how to adjust programs to ensure that both young men and young women have equal access to project activities and opportunities. Gender issues to consider when designing and implementing employability programs include the following:

- **Participant Selection** — How do programs ensure that young women and men have equal access to training opportunities? Are program outreach and recruitment efforts inclusive? What are the barriers to participation and how can they be addressed? Are program selection policies and processes fair and gender sensitive?
- **Vocational/Technical Training** — Are there differences between young men and women in enrollment rates? If so, does this vary with type of training? What factors (social, cultural, economic, etc.) may contribute to this imbalance? Do male and female participants have equal access to opportunities in all subjects, or is there gender “tracking”? Is there equal access to technology? How can programs promote greater inclusion and retention of participants in nontraditional courses? How can curricula be adapted to reduce or eliminate gender stereotypes?
- **Teachers/Trainers/Facilitators** — Does teacher training address gender issues? Are training methodologies appropriate for student needs? Are there both female and male facilitators and trainers? Do teachers treat male and female students fairly in class, and do they promote a positive environment among students? Are there any issues of sexual harassment, exploitation, violence or abuse in or around the classroom?
- **Environmental Constraints** — Is the timing of training and internships conducive to the participation of both men and women? Are there transportation issues that impede students’ enrollment and participation? Health or safety issues? Childcare issues? Family/household issues? Scheduling issues? Is it feasible for the program (or its partners) to address or mitigate these issues in some way?
- **Employment** — Are there differences in job placement between male and female participants? In their wages in formal sector jobs? In the quality, status, or security of their jobs? In their treatment by employers? In their job performance? In the perceptions and expectations of employers toward the employees? In the number of male or female youth working in the informal sector? Do young men and women have the same opportunities for advancement? Are youth working in hazardous conditions or experiencing exploitation, threats, sexual harassment, abuse or violence? Do male and female entrepreneurs have the same access to credit and business support services (e.g., mentoring)?

Monitoring and Evaluation

Effective monitoring and evaluation is essential to measuring outcomes, improving programming, keeping employability programs relevant

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to changing local market needs, and building a framework for program sustainability. M&E activities also *provide government officials, development managers, and civil society organizations with better means for learning from past experience, improving service delivery, planning and allocating resources, and demonstrating results as part of accountability to key stakeholders. Although M&E standards vary widely across youth employability programs, the following guiding principles are generally accepted.*

- **Relevance** — Data generated through M&E activities are relevant to program learning and improvement.
- **Rigor** — The highest possible standards in M&E efforts are used in the interest of promoting the credibility, quality, and utility of findings.
- **Practicality** — M&E activities are appropriate, given available resources and capacity.
- **Regularity** — Programs define and budget for M&E activities at the design stage to ensure they conduct M&E according to a schedule and can integrate program improvements based on outcomes.
- **Accountability** — Programs share M&E information with stakeholders in the interest of transparency, improved program outcomes, and learning.

BUDGETING FOR A TRAINING PROGRAM

Developing a budget for the delivery of youth employability or entrepreneurship training programs should take into consideration whether the training will be provided internally or by a third party. If training will be done using internal resources, budgets should include amounts for procuring the necessary resources and related personnel costs.

The use of third-party trainers may require that the organization pay per hour of instruction or pay a per-learner licensing fee. If a service provider will be used, it is highly recommended that the implementing organization conduct a competitive bidding process to identify the optimal firm.

Budgets should also include general training costs, such as training venue and staff, as well as costs associated with placement efforts, such as setting up a placement office, allocating resources to develop systems to monitor internships and jobs, and providing logistical support and transportation stipends to youth to enable them to undertake internships. Arrangements should be made with employers to leverage support for training programs such as equipment, software/hardware, and training materials.

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OPPORTUNITIES IN ICT

Information and communications technologies (ICT) are changing the way the world does business. New technologies in particular can improve the delivery of information and services in sectors as diverse as education, manufacturing, agriculture, and health. The growth of the ICT sector itself has opened new avenues for youth employment and entrepreneurship, as the costs of developing ICT skills is within the reach of low-resource communities. Some viable opportunities for youth employment in the ICT sector follow.

- **Web Designers** plan and develop Web sites, which may include general communications materials, downloadable publications, and software applications, as well as video, image, and audio files.
- **Salespeople** work in the formal and informal sectors selling a variety of products and consumer goods, such as insurance, mobile phones, computers, and accessories, as well as services, such as mobile banking (M-PESA). Entry-level job opportunities include sales agents or associates, sales support staff, and customer service representatives.
- **Cyber Café Managers** provide customer service, monitor Internet usage, and maintain and repair computers and other equipment.
- **Mobile Application Developers** conceive of and create applications for mobile devices.
- **Call Center Agents** provide customer service through a call center, a centralized facility that receives and transmits a large volume of requests by telephone.
- **Network Managers and ICT Hardware Maintenance Technicians** administer, operate, and monitor network systems as well as maintain and repair computers and equipment.

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WHAT DO WEB DESIGNERS DO?

Web designers plan and develop Web sites, which may include general communications materials, downloadable publications, and software [applications](#), as well as video, image, and audio files.

WHAT IS THE EMPLOYMENT OUTLOOK FOR WEB DESIGNERS?

As a result of economic growth in East Africa and increased access to high-speed Internet, particularly in major commercial centers, Web designers are in increasing demand. Companies in the region are beginning to understand the importance of having dedicated Web sites for a variety of company activities, including marketing and product awareness. Private sector employers in Kenya and Rwanda identified Web design network management and data entry as the leading technical skills they are looking for in employees. More developed Web services, such as E-commerce, may also emerge as the banking system improves and consumers begin to use the Internet for banking. Overall demand for these skills is expected to intensify as existing companies grow and new companies enter the marketplace.

Mary, 25, of Nairobi, Kenya, came from a large family with few resources. She struggled through school, yet completed her secondary education with sheer determination. In 2009, Mary joined NairoBits, an interdisciplinary Webmaster program for at-risk youth in Nairobi. After completing the Web design training, she went on to work for Ideas Africa, a Nairobi-based Web solutions provider. After gaining experience at Ideas Africa, Mary now runs her own multi-media consultancy and serves as a role model for girls in the NairoBits course.

WHAT IS THE BIG PICTURE?

Recommended training location	Urban location, for access to a reliable Internet connection
Target beneficiaries	Youth ages 17–24 who have completed level four in the Kenyan and Rwandan educational systems and are able to read and write English
Average length of course	9 months (approximately 1,300 hours)
Maximum class size	20

Training in English language skills, life skills, and job-seeking skills is also recommended to increase opportunities for employment.

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- Inventory Officer
- Production Assistant

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Assessment: Kenya

Assessment: Rwanda

WHAT ARE THE TRAINING OUTCOMES?

Upon successful completion of the Web design course, graduates will

- Be qualified to provide Web development services
- Understand art and design concepts
- Be technically proficient in Web design software
- Understand the basics of business communications
- Have compiled individual portfolios that showcase their Web design abilities

Training providers are encouraged to certify graduates. Graduates may also obtain certification, at cost, through w3schools.com or other third-party certification providers.

A youth trained in Web Design skills can provide an efficient way for emerging agriculture cooperatives to market their products and health centers to detail services offered to potential patients. Local NGO's working to improve the agriculture and health sectors also require the service of Web Designers to communicate their programs, impact, and contact information.

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- Basic literacy
- Basic numeracy
- Basic computer skills
- Ability to read and write English

Recommended:

- Solid Internet research skills

Young people who lack basic computer skills may acquire it through a service provider, such as the International Computer Driving License (<http://www.icdl.org.za/centres.php>). A Web design training institute may also provide basic computer skills training. In addition, Microsoft's Digital Literacy training can be easily accessed by qualified NGOs at no cost and provided to youth.

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- An International Computer Driving License (ICDL), or a certificate in Web Design from an equivalent program or formal college
- An understanding of Web design process

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Assessment: Kenya

Assessment: Rwanda

- Experience working in the classroom
- Excellent instructional skills
- Experience interacting with youth

Qualified trainers may be identified through Web design or advertising companies, universities, and graduates from similar programs (such as NairobiBits). Since Web designers will not likely leave their current jobs, it may be necessary to schedule training courses around their availability, such as in the evening or on the weekends.

Implementing organizations may want to provide facilitator training courses that provide potential trainers with opportunities to learn instructional skills, such as classroom management, creating a classroom environment that promotes learning, strategies for engaging learners, and methods for facilitating small and large group learning.

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

Several online curricula for Web design are available; however, resources available at no cost to the user are limited. When selecting a curriculum for training, implementing organizations should consider how well the material responds to industry demand and meets the needs of learners. Training materials should be tailored to respond to the needs of local employers, allowing students to acquire customized skills and contextualized knowledge of how their training will be applied in the marketplace.

The two curricula described below have been successfully adapted to local contexts and are available free of charge to qualified organizations.

Web Star and Media Lab Training

This curriculum is provided by NairobiBits, Kenya-based organization whose learning approach blends self-guided computer-based instruction with face-to-face instruction led by facilitators. The curriculum, which consists of 1,608 instructional hours and 528 hours of internship, teaches a range of skills, such as the development of concepts, logo design, PHP basics, and working with Joomla content management systems.

For more information about course content, delivery, and access, contact Mark Kamau at NairobiBits (mark@nairobiBits.com).

w3schools.com

This self-guided, Web-based tutorial is offered by Refsnes Data. It has been tested and used by Shaking Sun Rwanda, a Web development firm that used the tutorials to train youth in Kigali. It offers free tutorials, references, and testing capability for skills in HTML, HTML5,

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CSS, JavaScript, and XML. Similar to the Media Lab training mentioned above, this course covers a range of key skills required by the industry, such as building a Web site using JavaScript, and server scripting with SQL or ASP.

WHAT TECHNOLOGY IS NEEDED?

Organizations interested in providing Web design training should be equipped with the following:

- Computers
- Local area network (LAN)
- Electricity
- Internet connection, preferably 64kbps.
- Licenses for Adobe Creative Suite or equivalent applications (graphic design, Web layout and functionality development)
- Web design curricula
- Secure facilities

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- Hands-on projects and assignments
- Activities that encourage learners to extend and adapt the ideas introduced in the course to their own environment
- Peer dialogue, brainstorming, and problem-solving activities
- ICT skills training and additional support, as needed
- Interactions with the industry, including contact with employers, visits to Web design firms, and guest lectures

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

Training providers may find it useful to:

- Include job placement services as part of the training package
- Arrange internships in which graduates can apply newly acquired skills in a real work environment
- Analyze market data to identify employers, inform them of and engage them in the program, and build relationships with these companies
- Introduce the program to chambers of commerce or other business associations
- Attend local and regional ICT events to network with potential employers
- Actively engaging employers early in the design process by asking employers to review curricula to ensure it covers relevant skills and meets industry requirements

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Assessment: Kenya

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- Invite employers to speak to youth about the program, and provide open days on which employers and youth can interact one-on-one and in small groups
- Arrange field trips for youth to tour employer campuses

Internships are mutually beneficial for trainees and employers. They provide youth with real work experience and give employers an opportunity to test the skills and attitudes of youth before hiring them as employees. Despite the importance of job placement and internship services, they alone are not enough to influence quality program outcomes. The overall success and impact of a Web design training program depends largely on how well it responds to the training needs of employers, the demands of the local labor market, and its ability to equip youth with essential skills and knowledge.

ADDITIONAL RESOURCES

- Google Code University <http://code.google.com/edu/>
Google Code University is an open education resource that provides tutorials and links to courses on various programming languages and Web development tools. Users can also access video tutorials provided by third-party content providers, ask questions on the discussion forum, and search for specific curricula.

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WHAT DO SALES PEOPLE DO?

Sales people work in the formal and informal sectors selling a variety of products and consumer goods, such as insurance, mobile phones, computers, and accessories, as well as services, such as mobile banking (M-PESA). Entry-level job opportunities include sales agents or associates, sales support staff, customer service representatives, and micro/small business owners.

WHAT IS THE EMPLOYMENT OUTLOOK FOR SALES JOBS?

Health and other forms of insurance are rapidly growing subsector across Africa. Sales presents a viable avenue for youth employment as companies increasingly target a broader consumer base, such as low-income households, for health and other insurance products and services. Similarly, mobile banking (such as M-PESA services in Kenya) and mobile insurance are growing markets.

Eunice, age 26, had completed her secondary education in Nairobi and undertook ACWICT's training in 2009. With support from ACWICT, she found a job and has been working with the British American Insurance (BAI) as an Imaging Assistant. Her responsibilities include helping insurance companies digitize their records using fortis, supporting BAI's implementation of the document management system, internally interfacing with medical and life insurance departments, and training and providing support services to end users. Eunice said, "It is important to have basic computer and database management skills and to know Business English. I am currently pursuing a diploma in ICT and hope to join the consultation team in the next two to four years. I'd like to help all the insurance companies to become paperless."

WHAT IS THE BIG PICTURE?

Recommended training location	Local training institution or center
Target beneficiaries	Unemployed youth ages 18–30
Average length of course	5 months (520–630 hours) including classroom and on-the-job training
Maximum class size	20
Other considerations	Graduates may need additional training depending on the types of products and services they are selling. For example, graduates entering the insurance industry will need to supplement their general sales training with training on specific insurance products such as health, life, disability, or asset insurance.

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Training for sales and marketing covers a range of topics, such as customer service, brand management, and marketing. Through these courses, students learn how to communicate the benefits of a product or service and respond to customers' needs effectively. Sales skills are highly transferable and can be applied broadly to various products and services. During on-the-job training, students gain practical experience working with companies and learn different strategies to maximize sales and support customers. For individuals interested in pursuing the entrepreneurship track, basic entrepreneurship skills training should be integrated.

Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for employment.

WHAT ARE THE TRAINING OUTCOMES?

Upon successful completion of the course, graduates will be qualified for entry-level, sales-specific or related positions in various industries, including local and international insurance, banking and finance, and general trading and consumer retail.

By the end of the course, students are expected to have increased their knowledge in salesmanship and in the use of ICT to support sales management. In addition, they will have improved their life skills, workplace attitudes, and interpersonal communications skills.

Students should be encouraged to take accreditation or government trade exams, such as those offered by Institute of Professional Studies in Kenya for students completing the salesmanship course at [Strathmore University's Informal Sector Business Institute](#).

WHAT ARE STUDENT PREREQUISITES?

Required:

- Some secondary education
- Basic literacy
- Basic numeracy
- Life skills

Recommended:

- Basic computer knowledge
- Ability to communicate and write in English

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- Qualifications and experience in delivering sales and marketing courses
- Theoretical background and real-world knowledge

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- Excellent instructional and facilitation skills
- Connections to the local private sector to facilitate internship and job placements

Recommended skills include:

- Direct sales experience and knowledge

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

Sales courses are offered as part of the integrated technical skills training at the [African Center for Women and ICT \(ACWICT\)](#) and [Strathmore University's Informal Sector Business Institute \(ISBI\)](#). An overview of the ACWICT and ISBI training programs is presented below.

Training Design	ACWICT	ISBI
Overall Training	632 hours (more than 98 days) for both in-class and on-the-job training	520 hours (more than 100 days) for both in-class and on-the-job training
Foundational/Core Courses	IT Essentials: 72 hours / 18 days	Microsoft's Unlimited Potential (basic computer skills): 100 hours / 17 days
	Life skills: 40 hours / 10 days	Life skills: 40 hours / 7 days
	N/A	Entrepreneurship and business management: 20 hours / 3 days
	On-the-job: 480 hours / 60 days	On-the-job: 160 hours / 20 days
Specialized Sales Training	Sales and Marketing (40 instructional hours delivered over 10 days)	Salesmanship (200 instructional hours delivered over 33 days)
Key Topics of the Sales and Marketing Curricula	<ul style="list-style-type: none"> - Customer service and relations - Brand Management - Public relations - Creativity in advertising - Credit sales management - Regional/international marketing - Merchandising - Marketing strategy and planning - E-marketing 	<ul style="list-style-type: none"> - Training and development of a salesperson - Managing sales - Managerial roles and responsibilities - Personal effectiveness - Managing people - Performance appraisal systems - Effective leadership styles - Teamwork

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Interested organizations should contact ACWICT or ISBI for more details.

A range of sales and marketing courses and resources are available. For example, [IBM](#) and the [Sales Institute in South Africa](#) offer sales training (see other resources, below). Training providers should select or develop a curriculum that is demand-driven and responds to the needs of both employers and learners. The curriculum should be highly practical and equip students with marketable skills, encouraging their entrepreneurial, critical, and creative thinking capacities.

WHAT TECHNOLOGY IS NEEDED?

The following resources are needed to conduct a training program that includes computer-based modules:

- Computer
- Software
- Projector
- Printer
- Internet connection
- Training Manuals

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- Classroom instruction
- Interactive discussions and group projects
- Student consultancies or internships/apprenticeships in sales and marketing
- Guest lectures
- Mentoring
- On-the-job training

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

Training providers may find it useful to:

- Allocate resources to set up placement offices with dedicated staff to work with companies and find internship/job opportunities for youth
- Develop systems to place and track students as they undertake internships
- Solicit regular feedback from employers

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- Conduct labor market surveys and monitor local labor markets to ensure there is sufficient demand for the type of training provided
- Consider providing enterprise development and mentoring support for students interested in self-employment (in both the informal and formal sectors)
- Facilitate linkages with local financial institutions for youth who are in need of financial support
- Organize career fairs
- Pair students with mentors who are leading practitioners in specific fields

How youth can become M-PESA Agents in Kenya

M-PESA was first launched in Kenya in 2007. By January 2010, M-PESA had over 9 million registered users and nearly 17,000 agents, with person-to-person transfers totaling US\$330 million. Youth who would like to become M-PESA agents must meet three shop requirements set by Safaricom, one of which is raising 300,000 shillings, the amount considered sufficient to start three M-PESA shops in different locations. If chosen to become an agent, this investment becomes the shop's working e-float (e-currency) balance. If youth are unable to raise this amount, they can become sub-agents, working with a company or individual shop owner with whom they split profits. Alternatively, they can become salaried employees at M-PESA shops.

ADDITIONAL RESOURCES

Links to other relevant resources are presented below:

- [“The Sales Management Checklist”](#) and [“The Sales Negotiation Guide,”](#) by Just Sell
- [“Overcoming Ten Biggest Mistakes Sales Managers Make”](#) and [“Top 12 Mistakes Salespeople Make,”](#) by Kevin Davis (Topline Leadership: Sales and Sales Management Training)
- [“Marketing Insights from A to Z: 80 Concepts Every Manager Needs to Know”](#) by Philip Kotler
- [Writing skills for business English, by Commonwealth of Development](#)

URLs

- African Center for Women and ICT (ACWICT): www.acwict.org
- IBM: www-03.ibm.com/systems/education/topgun/
- Overcoming Ten Biggest Mistakes Sales Managers Make: http://www.toplineleadership.com/free_downloads
- Marketing Insights ... :<http://www.col.org/SiteCollectionDocuments/country-information/marketinginsightsfroma-z.pdf>
- Sales Institute in South Africa: <http://www.salesinstitute.co.za>

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- Sales Management Checklist: http://www.justsell.com/wp-content/themes/justsell/pdf/tools/sales_mgmt.pdf
- Sales Negotiation Guide: http://www.justsell.com/wp-content/themes/justsell/pdf/tools/negotiation_guide.pdf
- Strathmore University's Informal Sector Business Institute: www.eitkenya.org
- Writing skills for business English, by Commonwealth of Development: www.col.org/resources/crsMaterials/Pages/Writing.aspx

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Cyber Café Manager

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WHAT DO CYBER CAFÉ MANAGERS DO?

ICT centers, also known as telecenters or cyber cafés, are places where people can use computers, access the Internet, and use other digital technologies for a fee. An Internet café manager is responsible for providing customer service, monitoring Internet usage, and maintaining and repairing computers and other equipment.

WHAT IS THE EMPLOYMENT OUTLOOK FOR CYBER CAFÉ MANAGERS?

Public Internet access centers account for a significant portion of Internet usage in Africa, and therefore opening and managing cyber cafés is a viable employment opportunity.

A significant part of Rwanda's National Information and Communication Infrastructure (NICI) strategy is focused on developing skills and creating employment opportunities in rural areas through the establishment of local ICT centers, also known as telecenters. So far, twelve centers and two mobile ICT buses are operational and another eighteen centers will soon be open. The [Rwandan Telecentre Network](#) coordinates 150 telecenters in the country, 90 percent of which are located in semi-urban and rural areas. Local entrepreneurs operate the centers, which have five to twenty computers and other equipment such as scanners, printers, televisions, CD players, and video players.

Barea, P. "A Network of Telecenters for a New Economy."

WHAT IS THE BIG PICTURE?

Recommended training location	Flexible
Target beneficiaries	Youth ages 18–35
Average length of course	6–8 months (420 hours)
Maximum class size	20
Other considerations	To provide Cisco's training in IT essentials, an institution must be accredited by Cisco

Training programs for cyber café managers should include network and computer repair, and sales. If potential beneficiaries express interest in starting their own cyber cafés, and if it seems appropriate within the local context, training providers may offer enterprise development training in addition to the technical components mentioned above.

Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for employment.

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WHAT ARE THE TRAINING OUTCOMES?

Following successful completion of the course, a student will possess the skills to:

- Install an operating system
- Troubleshoot using system tools and diagnostic software
- Respond to customer inquiries and assist with the resolution of technical issues
- Perform preventive maintenance and troubleshooting on components of a printer/scanner
- Manage finances related to the operation of a cyber café
- Design and implement a business plan (only enterprise development training)

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- High school diploma (Rwanda: Secondary Education Advanced Level; Kenya: Certificate of Secondary Education)
- Advanced studies in information management, computer sciences, or computer repair
- Basic entrepreneurship training (completed)
- Ability to read and write in native language or English
- Knowledge of MS Word, Excel, and PowerPoint
- Basic understanding of PC troubleshooting
- Knowledge of accounting practices and corresponding software
- Ability to operate ICT equipment (printers, photocopiers, scanners)
- Customer service skills
- Excellent business skills

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- The International Computer Driving License (ICDL)
- NC II or equivalent training

Recommended skills include:

- At least 2 years' experience working in a cyber café.

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WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

A variety of training resources are available and should be selected based on how well they respond to industry demand and meet the needs of learners. The following training materials should be tailored to respond to the needs of local employers, allowing students to acquire customized skills and contextualized knowledge of how their training will be applied in the marketplace.

Computer Networking & Repair: [Cisco's IT Essentials: PC Software & Hardware](#)

Modules of Cisco's IT Essentials: PC Software & Hardware training curriculum can be incorporated into a holistic training program providing participants with the advanced ICT skills needed to manage the operations of a cyber café. Particularly relevant modules are:

- Basics of Preventive Maintenance and Troubleshooting
- Fundamental & Advanced Operating Systems
- Fundamental Printers and Scanners
- Fundamental & Advanced Networks and Security

Graduates completing Cisco's IT Essentials training are eligible for [Comp TIA A+ certification](#), the industry standard for computer support technicians.

Cyber Café Management: [The Telecentre Foundation Academy](#)

The Telecentre Foundation Academy has developed a global curriculum in telecenter management, which is being translated and localized to suit the needs and requirements of telecenter workers worldwide. Telecenter management courses are offered at certificate, diploma, degree, and MBA levels through the Telecenter Foundation Academy. The curriculum comprises twelve modules covering telecenter fundamentals, planning, management, marketing & promotion, community informatics, and more.

Salesmanship: [The Informal Sector Business Institute](#)

ISBI's salesmanship training course totals 200 hours over a period of 33 days. The course covers managing people, managerial roles, personal effectiveness, delegation, effective leadership, and teamwork.

Adding these lessons on personnel management to the training resources mentioned above would be highly beneficial for youth seeking employment as cyber café managers. Training on management skills should be flexible and tailored to the needs of the student and potential employers. Training providers are encouraged to engage with other training institutes that are offering similar courses as above in its local area.

Optional: [Advocates for Youth](#)

Advocates for Youth published a nine-chapter manual that covers everything one needs to know to start a cyber café. The second, third, and fourth chapters describe the steps to set up and operate a cyber café. Chapters five and six cover computer, network, and Internet basics.

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WHAT TECHNOLOGY IS NEEDED?

The following resources are required to implement a training program using the materials referenced above:

- Computers (two youth per computer)
- Connectivity to the Internet and/or a local area network (LAN)
- Printer
- Projector
- Web browser
- Microsoft Office 2003
- Cisco's IT Essentials software (optional)

In addition, youth practicing basic computer maintenance and troubleshooting should be given hands-on opportunities to practice these skills. Therefore, trainer providers should have a basic computer repair kit available for youth. The kit should include the following tools:

- Phillips screwdriver
- Flathead screwdriver
- Hex Socket Drivers (various sizes)
- Needle-nose pliers
- Electrostatic discharge (ESD) wrist strap and cord
- Electrostatic discharge (ESD) mat with a ground cord
- Safety glasses
- Lint-free cloth
- Electronics cleaning solution
- Flashlight
- Thermal compound

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- Hands-on projects and assignments that encourage the development of technical skills
- Activities that encourage learners to extend and adapt the ideas introduced in the course to their own environment
- Peer dialogue, brainstorming, and problem-solving activities

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HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

Training providers may find it useful to:

- Include job-placement services as part of the training package
- Arrange internships in which graduates can apply newly acquired skills in a real work environment
- Pair students with mentors
- Link graduates to financial institutions for business loans and other sources of start-up capital

ADDITIONAL RESOURCES

- Energy for Sustainable Development Africa Ltd. [Installation, Training and Commissioning Of Battery-Inverter Power Backups For Telecenters in Rwanda.](#)
- For telecenters in rural areas running on battery power, managers should be technically trained on the installation and maintenance of the battery backup system during the installation.
- For basic information on how to start a cyber café, refer to www.openanInternetcafe.com

URLs

- Advocates for Youth: <http://www.advocatesforyouth.org/storage/advfy/documents/cybercafe.pdf>
- Cisco: www.cisco.com
- Cisco's IT Essentials: PC Software & Hardware: http://www.cisco.com/web/learning/netacad/course_catalog/IT1.html
- Comp TIA A+ certification: www.comptia.org
- Energy for Sustainable Development Africa Ltd.: <http://www.share4dev.info/kb/documents/4241.pdf>
- Informal Sector Business Institute: www.eitkenya.org
- Rwanda Telecentre Network: <http://www.rtnrwanda.org>
- Telecentre Foundation Academy: www.telecentre.org

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Assessment: Kenya

Assessment: Rwanda

WHAT DO MOBILE APPLICATION DEVELOPERS DO?

Mobile application developers conceive of and create applications for mobile devices.

WHAT IS THE EMPLOYMENT OUTLOOK FOR MOBILE APPLICATION DEVELOPERS?

Several employment opportunities exist for youth in the emerging field of mobile applications development. Trained youth may secure employment with software development companies, mobile service providers, and other IT firms. Opportunities also exist for entrepreneurs to create and sell applications designed for specific industries, including health, education, and entertainment.

[HeHe Limited](#) is a mobile applications development company founded in 2010 by Clarisse Iribagiza and Amiri Mugarura, following an MIT AITI training in 2010. The company now employs four people. HeHe developed Gahunda, a platform for improving public service delivery. HeHe also leads mobile development training sessions at the Kigali Institute of Science and Technology.

WHAT IS THE BIG PICTURE?

Recommended training location	Urban settings or proximity to a telecenter facility (for access to well-equipped computer labs)
Target beneficiaries	Youth 18–35 who have finished secondary school and are interested in the field
Average length of course	6 weeks (210 hours)
Maximum class size	55
Other considerations	Most existing trainings are offered at local universities such as the Kigali Institute of Science & Technology and Strathmore University in Kenya

Training is conducted through lectures, development labs, assignments, and a final project. Students should be exposed to case studies of mobile applications developed by previous training cohorts and others in the local or regional developer community. Training should cover the fundamentals of entrepreneurship as well as the skills needed to create commercially viable applications, which include design thinking, opportunity identification, and team formation.

Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for possible employment or client interaction.

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WHAT ARE THE TRAINING OUTCOMES?

Upon successful completion of a mobile application development course, youth should be able to:

- Program using Python
- Use a Web Applications framework
- Generate ideas for applications
- Create a mobile Web application starting at the design stage
- Apply entrepreneurship skills, such as business planning and market research

Although course certificates can be provided to those who complete the training, the development of a mobile Web application itself serves as the primary reference for future employment opportunities.

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- High school diploma
- Excellent literacy and numeracy skills
- Ability to read and write English or literacy in the primary language required in the call center
- Typing skills
- Communication, organization, and teamwork skills

Youth who lack basic computer skills could be trained through a service provider for the [European Computer Driving License ECDL/ICDL](#) and Microsoft's [Unlimited Potential](#).

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- Extensive mobile Web application development experience or certificate from a formal program or college
- Excellent instructional skills
- Experience interacting with youth

Implementing organizations may want to offer facilitator training courses that provide potential trainers with opportunities to learn instructional skills, such as classroom management, creating a classroom environment that promotes learning, strategies for engaging learners, and methods for facilitating learning in small and large groups.

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Opportunities to interact with youth in informal settings or to observe other trainers working with youth in the classroom will also increase a potential facilitator's ability to successfully manage the classroom, engage learners, and promote positive learning outcomes.

Qualified trainers may be identified through partner institutions, Mobile Web application development companies, and graduates from similar programs. Because Mobile Web application development instructors may not be fully versed in principles of entrepreneurship, there may be a need to hire a different instructor for the entrepreneurship training components.

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

Many curricula are provided in partnership with universities or private sector organizations that have established software development and entrepreneurship centers of expertise. In addition to providing training in the standard technical skills required by the industry, these resources encourage learners to identify and address market opportunities. The curricula described below have been successfully used in the local context and are available free of charge to qualified organizations. The resources required to use the curricula are also discussed below.

- [*Massachusetts Institute of Technology Accelerating Information Technology Innovation \(AITI\)*](#)

The course, taught by MIT students and instructors, is delivered in partnership with other universities, such as the Kigali Institute of Science and Technology in Rwanda, and Strathmore University in Kenya. Components include a detailed technical curriculum, funded business competitions, guest lectures, and networking events. This [*curriculum*](#) covers a range of skills required by mobile Web developers, such as coding in Python Script, use of Web application frameworks, and the skills to develop small apps for commercial use.

Interested organizations are encouraged to contact the MIT AITI program to determine whether partnership opportunities are available locally.

- [*MIT's Entrepreneurial Programming and Research on Mobiles \(EPROM\)*](#)

EPROM offers two entry-level curricula to teach students Python and SMS-based mobile application development. These curricula include Mobile Phone Programming for Entrepreneurs and Python for Rapid Mobile Application Development. The curriculum is offered to students of local partner institutions and involves class assignments, project work, and lectures. Training has been delivered in Ethiopia, Uganda, Rwanda, Mozambique, South Africa, Tanzania, Nigeria and Senegal.

At the end of the course, students will have the skills to design, launch, and market their own mobile application.

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Mobile Application Development

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WHAT TECHNOLOGY IS NEEDED?

Organizations interested in offering training should have:

- Computers
- A local area network (LAN)
- Electricity
- Internet connection, preferably 64kbps
- Sample phones to test applications or mobile phone emulator software
- Secure facilities

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- Hands-on projects and assignments
- Activities that encourage learners to extend and adapt the ideas introduced in the course to their own environment
- Peer dialogue, brainstorming, and problem-solving activities
- Case studies of youth who have developed mobile applications
- Interactions with the industry, including contact with employers, visits to mobile Web application development firms, and guest lectures

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

Training providers may find it useful to:

- Analyze market data to identify employers, inform them of and engage them in the program, and build relationships with these companies
- Introduce the program to chambers of commerce or other business associations (this may require sensitizing these entities to the use of mobile apps to improve productivity or marketing)
- Sign MOUs or letters of commitment with partner companies to facilitate placing youth in internships
- Encourage students to enter local competitions such as m:Lab, PIVOT25, and Tandaa to obtain financial support, general development support, and mentoring

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ADDITIONAL RESOURCES

- [eMobilis](#)
eMobilis students, through fee-based programs, learn how to create games, tools, screen-savers, themes, mobile inventory management systems, mobile car tracking systems, and distributed gaming applications.
- [Google Code University](#)
Google Code University is an open education resource that provides tutorials and links to courses on various programming languages and Web development tools. Users can also access video tutorials provided by third-party content providers.
- [Mobile App Lab](#)
Mobile App Lab provides training to youth ages 14–21 on various competencies in media/literacy, journalism, and mobile application development.
- [Youth App Lab](#)
Youth App Lab is a MacArthur Foundation funded project of Uplift, Inc., that teaches youth to develop mobile applications. The sessions meet after-school over the course of one school year.

URLs

- eMobilis: <http://emobilis.org/>
- European Computer Driving License: <http://www.icdl.org.za/centres.php>
- Google Code University: <http://code.google.com/edu/>
- Massachusetts Institute of Technology Accelerating Information Technology Innovation (AITI): <http://aiti.mit.edu/>
- Microsoft's Unlimited Potential: <http://www.microsoft.com/About/CorporateCitizenship/en-us/>
- MIT AITI Curriculum: <http://aiti.mit.edu/program/rwanda-summer-2011/>
- MIT's Entrepreneurial Programming and Research on Mobiles (EPROM): <http://www.media.mit.edu/ventures/EPROM/index.html>
- Mobile App Lab: <http://mobileapplab.wordpress.com/>
- Youth App Lab: <http://www.youthapplab.com/>

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WHAT DO CALL CENTER AGENTS DO?

Call center agents provide customer service through a call center, a centralized facility that receives and transmits a large volume of requests by telephone.

WHAT IS THE EMPLOYMENT OUTLOOK FOR CALL CENTER AGENTS?

Countries with adequate ICT infrastructure are able to provide IT-enabled services to companies that outsource customer support and other business processes. There is a growing demand for call center agents in Rwanda and Kenya. Qualified call center agents are highly sought after in Rwanda's telecom sector, and in Kenya, the government is supporting business process outsourcing (BPO) and other IT enabled services. Securing employment in this sector is therefore an increasingly viable option for youth.

The Ethiopian AIDS Resource Center operates the *Wegen AIDS Talkline*, a national, anonymous toll-free hotline which provides callers with information about topics such as:

- HIV and AIDS
- Assistance in making decisions about HIV testing
- Support related to living with HIV and AIDS, including accessing and adhering to antiretroviral treatment
- Referrals for counseling, testing, and treatment

Talkline staff must have received training on phone counseling techniques.

WHAT IS THE BIG PICTURE?

Recommended training location	Urban location, for access to a reliable Internet connection and equipped computer labs
Target beneficiaries	Youth ages 18–35 who have completed level four in the Kenyan or Rwandan educational systems and are proficient in English
Average length of course	360 hours
Maximum class size	100

Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for employment.

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Assessment: Rwanda

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- Neutral accent, may require accent-neutralization training
- Basic literacy skills
- Basic numeracy skills
- Basic computer skills
- Ability to read, write, and speak English
- Specialized knowledge of product or service (i.e., agriculture-related positions require a degree in agriculture, livestock, or aquaculture, and at least 2 years' work experience in dairy farming, poultry or fisheries).

Recommended:

- Good communication, organization, and customer service skills

If youth entering a call center training course do not have a certificate in basic computer skills, it is recommended that this training be provided through a service provider, such as the [International Computer Driving License](#) or [Microsoft's Digital Literacy](#) training, which can be easily accessed by qualified NGOs at no cost. For practicing typing and data entry skills, several free online tutorials are available: [Basic Keyboarding](#), [Typing Test](#), and [Typing Speed Certification](#).

WHAT ARE THE TRAINING OUTCOMES?

Following successful completion of the course, students will possess the knowledge, skills, and attitudes to:

- Understand the fundamentals of BPO/call centers and technology infrastructure
- Deliver quality customer service
- Communicate effectively in English
- Operate computers and navigate the Internet
- Demonstrate understanding and knowledge of the culture and geography of potential clients in accordance with the industry standards

As most employers require proof of skills acquisition, training providers are encouraged to provide graduates with certificates of completion. Graduates may also obtain certification, at cost, through third-party certification providers such as the [International Customer Representative Certification Program](#).

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HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- An International Computer Driving License (ICDL)
- NC II or equivalent training
- At least 2 years' experience in the industry
- Experience working in the classroom
- Excellent instructional skills
- Experience interacting with youth

Because call center trainers and managers will not likely leave the sector in which they are employed, it may be necessary to schedule training courses around their availability, such as in the evening or on the weekends. Since the combination of industry and training skills may be difficult to find in a trainer, implementing organizations can offer courses that provide potential trainers with opportunities to learn valuable instructional skills, such as classroom management, creating a classroom environment that promotes learning, strategies for engaging learners, and methods for facilitating learning in small and large groups.

Opportunities to interact with youth in informal settings or to observe other trainers working with youth in the classroom will also increase a potential facilitator's ability to successfully manage the classroom, engage learners, and promote positive learning outcomes.

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

Companies that employ call center agents often provide in-house training for new employees, however, a variety of external training resources also exist. These on- and offline courses are available, typically for a fee, for people seeking to become a call center or customer service agents.

When selecting a curriculum for training, implementing organizations should consider how well the material responds to industry demand and meets the needs of learners. Curricula should be tailored to respond to the needs of the local sector being supported by the call center service (i.e., agriculture, health, mobile service). Tailoring training allows students to acquire customized skills and contextualized knowledge and more easily apply their skills in the marketplace.

The curriculum should prepare trainees for entry-level positions in inbound customer service, inbound/outbound sales, collections, help-desk, correspondence, data entry, claims processing, document management, transcription, and other positions. The following training materials meet these specifications.

- [Contact Center Services NC II](#)

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This curriculum, developed by the Technical Education and Skills Development Authority of the Philippines, provides training on a range of skills required by call center agents.

The course uses a mix of lectures, demonstrations, self-paced modules, role playing, peer teaching, and mentoring. The curriculum consists of approximately 360 instructional hours and covers training in relevant skills such as the ability to identify and use language communication cues, demonstrate understanding of the call center/BPO industry, handle customer complaints, and apply knowledge of common cultural variables.

WHAT TECHNOLOGY IS NEEDED?

Organizations interested in offering call center services courses must be equipped with the following resources:

- Computer with peripherals and software
- Computer tables and chairs (ergonomic)
- Dialer, telephone, and headset
- Electricity, and uninterruptible power supply (UPS)
- Server
- Hub (24 port), RJ 45, cables, etc.
- Local Area Network (LAN)
- Fax machine
- Voice recorder
- PC video camera
- Integrated voice response system (IVRS) / Switchboard
- Whiteboard
- Handbooks and manuals
- Internet connection, preferably 64Kbps
- Secure facilities

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- Hands-on projects and assignments
- Activities that encourage learners to extend and adapt the ideas introduced in the course to their own environment

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- Peer dialogue, brainstorming, and problem-solving activities
- Computer-based instruction and call simulation

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

Training providers may find it useful to:

- Include job placement services as part of the training package
- Arrange internships in which graduates can apply newly acquired skills in a real work environment
- Analyze market data to identify employers, inform them of and engage them in the program, and build relationships with these companies
- Introduce the program to chambers of commerce or other business associations
- Attend local and regional ICT events to network with potential employers
- Actively engaging employers early in the design process by asking employers to review curricula to ensure it covers relevant skills and meets industry requirements
- Introduce the program to local business processing outsourcing and call center firms and mobile telecom operators
- Arrange field trips for youth to tour employer campuses
- Arrange opportunities for youth and employers to interact one-on-one and in small groups

ADDITIONAL RESOURCES

For training that prepares youth for outbound calls (i.e., telemarketing), please reference the agricultural input sales opportunity profile.

Training Centers in Kenya that offer call center skills training skills as listed by the Kenya ICT Board:

1) The Multimedia University college of Kenya (Former KCCT): www.mmu.ac.ke

The Multimedia University BPO training runs for 8 weeks and focuses on the following:

- The BPO industry
- Contact center organizational structure
- Contact center management overview
- Call center
- Contact center technologies
- Customer management

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- Data processing
- Back office
- Telecommunications

2) [Jomo Kenyatta University of Agriculture and Technology](#)

3) [Augustana College](#)

4) [Kenya School of Professional Studies](#)

5) [Horizon Call Centers](#)

6) [Wisemen Trainers and Consultants](#)

Call Center Survival Tips for Pinoy Agents

This blog, written by a call center agent, provides tips on various issues encountered on and off the job.

Fundamental Knowledge and Skills for Front-Line Reps and Supervisors: Is Your Training Program Covering the Essentials?

http://www.thecallcenterschool.com/articles/Fundamental_Knowledge_and_Skills_Training.pdf

This article explains the top five items new employees should learn about a call center. These include the profession and industry, performance measurement, workforce management, call center technology, and customer relations. It also provides a checklist of various knowledge and skills needed by a call center manager.

URLs

- Augustana College: www.augustanacollege.co.ke
- Basic Keyboarding: <http://www.davis.k12.ut.us/cjh/appliedtech/Business/Keyboarding/Index.html>
- Call Center Survival Tips for Pinoy Agents: <http://callcentertips.wordpress.com/page/2/>
- Contact Center Services NC II: http://www.tesda.gov.ph/program.aspx?page_id=29
- Horizon Call Centers: www.horizoncontactcenters.com
- International Computer Driving License: <http://www.icdl.org.za/centres.php>
- International Customer Representative Certification Program: <http://www.ciac-cert.org/>
- Jomo Kenyatta University of Agriculture and Technology: www.jkuat.ac.ke
- Kenya School of Professional Studies: www.ksps.ac.ke

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- Microsoft's Unlimited Potential: <http://www.microsoft.com/About/CorporateCitizenship/en-us/>
- The Ethiopian AIDS Resource Center Report http://www.hhd.org/sites/hhd.org/files/2481%20HIVAIDS_Final_120407.pdf
- Typing Speed Certification: <http://www.learn2type.com/TypingCertificate>
- Typing Test: <http://www.typingtest.com/>
- Wisemen Trainers and Consultants: www.wisementrainers.co.ke

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Assessment: Kenya

Assessment: Rwanda

WHAT DO NETWORK MANAGERS/ICT HARDWARE MAINTENANCE TECHNICIANS DO?

Network managers and ICT hardware maintenance technicians administer, operate, and monitor network systems as well as maintain and repair computers and equipment.

WHAT IS THE EMPLOYMENT OUTLOOK FOR NETWORK MANAGERS AND ICT HARDWARE?

A 2010 World Bank report “[The Global Opportunity in IT-Based Service](#),” stated that only 20 percent of the addressable \$500 billion IT market had been exploited as of 2008. Of this market, \$100 billion constitutes traditional IT services such as hardware and software maintenance, network administration, and help desk services.

Though this is a global figure, it reflects the role of IT-based services as engines for employment as government institutions, public agencies, and large private sector companies, such as banks, supermarkets, and insurance companies all require skills in this field. A number of entrepreneurial opportunities related to network management and ICT hardware maintenance also exist.

Stephen graduated from the Cisco Academy at Raila Educational Centre in Kibera, an informal settlement in Nairobi, Kenya. After completing the IT Essentials course and free business training offered at the academy, Stephen used his new skills to open a computer repair shop. From starting the business in his bedroom, the business has expanded to three computer centers with 30 computers and four employees.

WHAT IS THE BIG PICTURE?

Recommended training location	Primarily urban areas, but increasingly rural areas
Target beneficiaries	Unemployed youth aged 18–35 who have completed a high school education
Average length of course	6-8 months (approximately 420 instructional hours)
Maximum class size	20

Training in English language skills, life skills, and job-seeking skills is also recommended in increase opportunities for employment.

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Assessment: Kenya

Assessment: Rwanda

WHAT ARE THE TRAINING OUTCOMES?

Upon successful completion of training, students will have the ability to:

- Describe the internal components of a computer
- Assemble a computer system
- Install an operating system
- Troubleshoot using system tools and diagnostic software
- Respond to customer inquiries and assist with the resolution of technical issues
- Remove and replace selected components of a laptop
- Upgrade laptop components based on customer needs
- Perform preventive maintenance and advanced troubleshooting
- Remove and replace selected components of a printer/scanner
- Perform preventive maintenance and troubleshooting on components of a printer/scanner
- Install a network; upgrade components based on customer needs and perform preventive maintenance and advanced troubleshooting

Program graduates will be prepared to take the CompTIA A+ certification exam (www.comptia.org) and are eligible to earn Cisco Certified Network Associate (CCNA) certification. CCNA certification is widely recognized and often listed as a minimum criterion for many networking jobs posted.

The Network Management curriculum prepares students for various entry-level positions including enterprise technician, IT administrator, field service technician, call center technician, help desk technician, and PC or support technician.

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- Basic literacy skills
- Basic numeracy skills
- Ability to read and write English
- Demonstrated ability and motivation to complete the training

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Assessment: Kenya

Assessment: Rwanda

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- Certification from a designated Cisco Regional Academy. Trainers must take the Cisco Academy Orientation course as well as coursework on IT Essentials 1, Cisco Certified Network Associate (CCNA) 1&2, CCNA 3&4, CCNA Security.
- Prior knowledge in computer maintenance and network management (eligible for Cisco's Fast Track option). The Trainer/ Instructor's eligibility for the Fast Track option is verified by specific industry certification, formal evidence of industry experience, or formal evidence of teaching experience.

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

[Cisco Networking Academy](#)

The Cisco Networking Academy curriculum is accessed online through Cisco's packet tracer software. Packet Tracer is available free to all Networking Academy instructors, students, and alumni.

The instructor-led training takes 420 instructional-hours and includes two modules: IT Essentials and Certified Network Associate. Topics covered in the IT Essentials curriculum include:

- Introduction to the Personal Computer
- Safe Lab Procedure and Tool Use,
- Computer Assembly
- Basics of Preventative Maintenance and Troubleshooting
- Network Fundamentals
- Advanced Printers and Networks
- Advanced Security

Upon completion of the IT Essentials module, students will advance to the Cisco Certified Network Associate (CCNA) module. The CCNA module includes four levels:

- Level 1: CCNA 1 – Network Fundamentals
- Level 2: CCNA 2 – Routing Protocols and Concepts
- Level 3: CCNA 3 – Switching Basics and Intermediate Routing
- Level 4: CCNA 4 – LAN Switching and Wireless

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Students who successfully complete this portion of the program are eligible to earn Cisco Certified Network Associate (CCNA™) certification.

[National Youth Employment Programme: Mobile Repair](#)

As part of the National Youth Employment Programme, the Government of Ghana partnered with the telecommunication firm rLG Communications to train youth on mobile phone repair and maintenance. Since 2009, the partnership has trained 5,000 youth. The 6-month course includes modules on:

- Computer basics
- Mobile phone software
- Mobile phone electronics
- Mobile phone hardware
- Sales and marketing studies (entrepreneurship studies)

WHAT TECHNOLOGY IS REQUIRED?

The following equipment is required to deliver the IT Essentials course:

- IT Essentials PC Hardware and Software Curriculum
- Internet connection
- Printer/scanner/copier
- One Linksys wireless router/switch or equivalent for the class to share, Linksys model WRT 300N preferred
- A computer toolkit with the following tools:
 - Phillips screwdriver
 - Flathead screwdriver
 - Hex socket drivers (various sizes)
 - Needle-nose pliers
 - Electrostatic discharge (ESD) wrist strap and cord
 - Electrostatic discharge (ESD) mat with a ground cord
 - Safety glasses
 - Lint-free cloth
 - Electronics cleaning solution
 - Flashlight
 - Thermal compound
 - Multi-meter
 - Compressed air service canister (optional, due to varying classroom health and safety laws)

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Assessment: Kenya

Assessment: Rwanda

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- Hands-on projects and assignments
- Activities that encourage learners to extend and adapt the ideas introduced in the course to their own environment
- Peer dialogue, brainstorming, and problem solving activities
- ICT skills training with additional support, as needed
- Interactions with the industry, including contact with employers, and guest lectures

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

Training providers may find it useful to:

- Include job placement services as part of the training package
- Arrange internships in which graduates can apply newly acquired skills in a real work environment
- Analyze market data to identify employers, inform them of and engage them in the program, and build relationships with these companies
- Introduce the program to Chambers of Commerce or other business associations
- Attend local and regional ICT events to network with potential employers
- Actively engage employers early in the design process by asking employers to review curricula to ensure it covers relevant skills and meets industry requirements
- Invite employers to speak to youth about the program, and provide open days in which employers and youth can interact one-on-one and in small groups
- Arrange field trips for youth to tour employer campuses
- Use organization Web site as a platform for marketing and job placement

ADDITIONAL RESOURCES

- Learnthat.com
Learnthat.com is an advertisement supported Web site that provides free CompTIA certifications tutorials, articles, and online courses. CompTIA A+ certification validates foundation-level knowledge and skills necessary for a career in PC support. The internationally, vendor-neutral certification proves competence in areas such as installation, preventative maintenance, networking, security, and troubleshooting.

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- [TechSoup for Libraries, The Joy of Computing](#)

This guide provides information on how to maintain computer networks in small and rural libraries. Main topics include how to:

- Determine your library and patrons' needs and plan accordingly
- Install antivirus and anti-spyware software
- Lock-down your computers
- Install disk-protection software
- Image your computer's hard drive
- Compare computer software

URLs

- Cisco Networking Academy: <http://www.cisco.com/web/learning/netacad/>
- Learnthat.com: <http://www.learnthat.com/certification/category-39>
- National Youth Employment Programme: Mobile Repair: http://www.ghana.gov.gh/index.php?option=com_content&view=article&id=5381:ministry-of-youth-and-sports&catid=74:ministries&Itemid=224
- TechSoup for Libraries, The Joy of Computing: http://www.techsoupforlibraries.org/files/CB1%20meal%20plan%20two_05_14_08.pdf
- "The Global Opportunity in IT-Based Service," Washington, DC: World Bank, 2010. <http://www.infodev.org/en/Publication.875.html>

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OPPORTUNITIES IN AGRICULTURE

Information and communications technologies (ICT) are useful throughout the agricultural value chain. Through radio, television, computers, and mobile devices, farmers and rural entrepreneurs obtain access to knowledge and information that can improve production process and increase income. The following list of employment and entrepreneurial opportunities in the agriculture sector all benefit from the use of ICT to some degree.

- **Agricultural Cooperative Managers** coordinate the activities of private enterprises in farming communities who band together to maximize market opportunities for their produce and services.
- **Agricultural Information Service Agents** provide specialized information to farmers, agricultural vendors, and their customers. This demand-driven service involves gathering and aggregating relevant and useful information and adding other value-added services.
- **Certified Organic Farmers** produce food using sustainable methods that exploit the benefits of the natural environment and deliberately exclude the use of synthetic agrochemicals, such as fertilizers and pesticides.
- **Agricultural Input Salespeople** sell products used in all agricultural activities, from chemicals to equipment and machines.
- **Storekeepers and Inventory Officers** generally perform administrative tasks, such as documenting the transactions of an establishment, making and tracking sales, and managing and replenishing stock. In the agricultural sector, storekeepers or agro-dealers sell products and advise customers on how to best use them.
- **Production Assistants** help to ensure the smooth functioning of all aspects of farm operations or of the production of a particular crop or livestock.

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WHAT DO COOPERATIVE MANAGERS DO?

Agricultural cooperative managers coordinate the activities of private enterprises in farming communities who band together to maximize market opportunities for their produce and services.

WHAT IS THE EMPLOYMENT OUTLOOK FOR CO-OP MANAGERS?

Agricultural cooperatives present promising employment and entrepreneurship opportunities for qualified candidates. There is a growing demand for cooperative managers to coordinate groups of small-scale farmers in Kenya and Rwanda, where the majority of farmers operate subsistence or small-scale farms. The advantages of joining together as a farming community is becoming increasingly recognized by farmers as a viable strategy for improving their market influence, gaining purchasing power, accessing lines of credit, marketing their produce, and withstanding losses. The demand for cooperative management is greatest in rural areas, but there is strong demand across regions in both Rwanda and Kenya. The high demand for cooperative management training is due to the localized, member-led nature of the partnership, which hinges on strong leadership and management capabilities, as well as on financial resources, all of which are scarce at the community level.

CoopAFRICA funds a project in Kenya that supports ten small dairy farming cooperatives in the Machakos district and strengthens their position in the dairy value chain. Among other activities, the project conducts value chain mapping, acquires milk processing and transport equipment, and facilitates group formation.

Promising Practices: How cooperatives work for working women in Africa

www.ilo.org/public/english/employment/ent/coop/.../women_day_coop.pdf

WHAT IS THE BIG PICTURE?

Recommended training location	Rural areas
Target beneficiaries	Flexible, but the course must be tailored to meet the individual needs of each cohort of learners.
Average length of course	4–5 months (200 hours)
Maximum class size	40
Other considerations	Comprehensive cooperative training and education policies are yet to emerge in Kenya and Rwanda, although Kenya is slated to formulate a strategy. Therefore, the training should be supplementary to the cohort's prior education and align with emerging trends for cooperative training and education in the country of training.

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Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for employment.

WHAT ARE THE TRAINING OUTCOMES?

Upon successful completion of a cooperative manager training program, youth should have strong management and decision-making skills as well as a solid understanding of the full range of cooperative operations. More specifically, students should be able to:

- Understand principles, governance structures, laws, and regulations relevant to cooperatives
- Use tools for planning and organizing cooperative activities (logframes, strategic planning, action plans)
- Plan, assign, and manage relationships and responsibilities (delegation and reporting procedures)
- Calculate and manage credit and operating costs
- Build partnerships,
- Understand and respond to change in cooperative market conditions
- Appreciate and identify potent marketing strategies
- Manage a cooperative office and or inventory using Excel and Access
- Perform accurate recordkeeping functions using standard procedures (using computers and booklets)
- Manage expectations and customer/supplier relations

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- Strong interest in agriculture
- Capacity to work well in teams
- Basic computer literacy
- High level of organizational and interpersonal skills
- High school diploma
- Prior participation in an agriculture training program

Recommended:

- Accredited diploma in agribusiness, agricultural science, cooperative management or a related field

Target beneficiaries can be recruited from 4H Clubs, young rural community development projects, youth extension offices, farmer associations, and agriculture colleges.

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HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- A Bachelor's degree in business administration/cooperative business/agribusiness or another related field

Recommended skills include:

- Experience in the agriculture sector

Potential trainers may be found at established co-ops, agriculture colleges, co-op institutes and colleges, and rural agricultural development agencies.

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

The following training resources have been tested in the local contexts and are available online at no cost. When selecting a curriculum for training, implementing organizations should consider how well the material responds to industry demand and meets the needs of learners. Training materials should be tailored to address the needs of local employers, allowing students to acquire customized skills and contextualized knowledge of how their training will be applied in the local context.

[Agromisa Foundation and the Technical Center for Agricultural and Rural Co-operation ACP-EU \(CTA\)](#)

This guide, a collaboration of Agricord, Agriterra, and Agromisa from The Netherlands, helps farming groups to start cooperative businesses. Designed to reflect the needs of contemporary cooperatives in Sub-Saharan Africa, it uses participatory techniques to show how farmer-controlled economic initiatives can start and grow.

[Agricultural Cooperative Development](#)

This FAO Manual for Trainers includes several communication exercises that are designed to teach the basic soft skills required to effectively manage a co-op. The manual is intended as a resource for training trainers and co-op managers and is not designed to be used as an instructional guide. It emphasizes decision-making based on community appraisal and provides guidance on accounting and managing credit.

[OER Africa: Farmer's Agribusiness Training Manual](#)

This student-centered, five-module curriculum was designed by OER Africa to equip both farmers and farmer organizations with the skills they need to transform their operations into organized and efficient entrepreneurial ventures. The core features

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of the curriculum that will help trainees navigate the learning process are suggested time frame for lessons and tasks (these should be contextualized by including practical exercises and discussions relevant to the local environment), lesson outcomes, online and CD ROM-based interactive supplementary resources, activities, a feedback guide, glossary, a conclusion to help gauge learning outcomes, and references.

[Multimedia version](#)

[Individual Module Outlines](#)

WHAT TECHNOLOGY IS NEEDED?

The following resources are needed to conduct a cooperative management training program that includes computer-based modules:

- Computers
- Projector
- Printer
- Internet connection
- Training manuals
- Accounting software (Quick Books)
- Accounting books
- 2 to 3 partner cooperatives

Some of the curricula resources mentioned above may be presented without the use of computers.

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- Hands-on projects and assignments
- Peer dialogue, brainstorming, and problem-solving activities
- Interactive discussions and group projects (groups of 5–10 participants)
- Training in communication, relationship building techniques, group facilitation, managing expectations, critical thinking, and conflict resolution
- Reviewing case studies to sharpen analytical and decision making skills
- Activities that encourage learners to extend and adapt the ideas introduced in the course to their own environment
- Visits to cooperatives

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- Guest lectures from successful cooperative farmers and managers
- Exposing participants to the role and function of management in a cooperative, the nature of the resources they will manage, management tools (accounting systems, incentive programs, strategic planning, communication, security, incentive schemes), the fundamentals of agribusiness, and how to manage local and regional operations (managing credit relations with customers and suppliers)

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

The following job/internship placement strategies have been tested and have shown good results:

- Invite potential employers to present their work to your students.
- Integrate a career fair into your training program. This brings employers into contact with your students, offering them exposure to potential employers or important networks of support and mentoring.
- Partner with local cooperatives to allow students to practice what they learn. Cooperatives are largely informal in Rwanda, but networking and job opportunities may be found via the Rwanda Cooperative Agency (RCA). The RCA's mandate is to advocate, arbitrate, and improve the performance of cooperatives in the country. Therefore, it is highly recommended that a strategic partnership be sought with the RCA to leverage the managerial and organizational skills trainees acquire. Internships and in-service training projects should form part of the framework. RCA recently launched an initiative to bring co-ops into a confederation, which will make a partnership of this nature even more attractive.
- Cooperatives are more common and structured in Kenya. The Ministry of Cooperative Development and a range of cooperative colleges, training institutes, regional and local co-ops could offer opportunities where trainees may find internships and jobs. Trainees should also be encouraged to join or start their own co-ops; more than 1 in 5 Kenyans are members of cooperatives. Funding for establishing youth cooperatives may be sought from the Youth Enterprise Development Fund and the Constituency Youth Enterprise Scheme.

ADDITIONAL RESOURCES

- United States Department of Agriculture Rural Business-Cooperative Service: Cooperative Management <http://www.rurdev.usda.gov/rbs/pub/cir1sec8/cir1sec8.pdf>

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Rural Finance Learning Center: Training Tools

- Marketing Mix Board Game
http://www.ruralfinance.org/training/training-tools/training-tools-details/en/?no_cache=1&srec=11751&tdet=training&tdet2=&tdet3=2&referer=MTAxNDg%3D
- SME Toolkit-Build Your Business
http://www.ruralfinance.org/training/training-tools/training-tools-details/en/?no_cache=1&srec=13003&tdet=training&tdet2=&tdet3=4&referer=MTAxNDg%3D
- Agribusiness Management for Producers' Associations
http://www.ruralfinance.org/training/training-tools/training-tools-details/en/?no_cache=1&srec=12314&tdet=training&tdet2=&tdet3=2&referer=MTAxNDg%3D
- Guides for Trainers
<http://www.ruralfinance.org/training/guides-for-trainers/en/>

URLs

- Agricultural Cooperative Development: [http://www.acdivoca.org/acdivoca/CoopLib.nsf/dfafe3e324466c3785256d96004f15a8/e29c7067e455f46585256f0200504cfa/\\$FILE/Agricultural%20Cooperative%20Dev_Manual_for_Trainers.pdf](http://www.acdivoca.org/acdivoca/CoopLib.nsf/dfafe3e324466c3785256d96004f15a8/e29c7067e455f46585256f0200504cfa/$FILE/Agricultural%20Cooperative%20Dev_Manual_for_Trainers.pdf)
- Agromisa Foundation and the Technical Center for Agricultural and Rural Co-operation ACP-EU (CTA):
http://journeytoforever.org/farm_library/AD38.pdf
- OER Africa: Farmer's Agribusiness Training Manual
Multimedia version: <http://www.oerafrica.org/FTPFolder/Agshare/Agribusiness/index.html>
Individual Module Outlines: <http://www.oerafrica.org/agricultureoer/AgricultureResources/tabid/1485/Default.aspx>

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WHAT DO AGRICULTURAL INFORMATION SERVICES AGENTS DO?

Agricultural information services agents provide specialized information to farmers, agricultural vendors, and their customers. This demand-driven service involves gathering and aggregating relevant and useful information and adding other value-added services. These services may include consulting with producers about what and when to plant and how to price, market, and transport goods. These services are highly localized and require the capacity to help customers interpret and use the information they receive. It is best provided in areas where cell-phone penetration is relatively high.

WHAT IS THE EMPLOYMENT OUTLOOK FOR AGRICULTURAL INFORMATION SERVICE AGENTS?

The proper functioning of the agricultural value chain depends on high-quality, reliable, and efficient access to information for decision-making. But poor communication among agricultural stakeholders, inadequate data collection, and a lack of access to important information results in ineffective planning, inefficiency, and lost income for farmers. This suggests a need for timely and reliable agricultural information and support services.

Existing services, such as KenCall, M-Kilimo (M-Agriculture), and the Arid Lands Information Network, are largely mobile-based, but they also make use of the Internet. The demand for agricultural information services creates employment and entrepreneurial opportunities for youth.

***Esoko:** This Ghanaian company uses mobile technology to help individuals and businesses share information efficiently and cost-effectively. Among other services, Esoko supplies the technology and expertise to help farmers enter markets and to connect buyers and sellers. Esoko employs a franchise model outside of Ghana and has developed support and training for entrepreneurs interested in providing services. Training includes field deployment, data collection methodology, business sales, and technology platforms.*

A path to employment has also emerged as the company expands beyond information for market prices, offers to buy and sell, and into advisory services on treating diseases, new growing practices, and application of fertilizers. The company plans to hire call center agents to provide this information in Dagbani, Hausa, Ewe, Akan languages.

***M-Kilimo:** M-Kilimo was launched in 2009 to provide high-quality, demand-driven information services to underserved smallholder farmers. M-Kilimo's voice-based services allow farmers to obtain agricultural advice in their native languages from helpline experts. The sustainability of this mobile-based farmer helpline is still under evaluation; it has been piloted and is currently supported through grants from the Development Fund and Rockefeller Foundation.*

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WHAT IS THE BIG PICTURE?

Recommended training location	Primarily rural areas, but potentially in urban and peri-urban areas depending on local needs and youth interests.
Target beneficiaries	Youth ages 18–35 with an interest in agriculture
Average length of course	4–5 months
Maximum class size	35

Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for employment.

WHAT ARE THE TRAINING OUTCOMES?

Participants who successfully complete the training should be able to:

- Provide basic agricultural information services to farmers, including product knowledge and use, remedies for common pests, and market price information
- Design a spreadsheet for database management
- Develop and effectively implement a database management strategy
- Query specific details in a database
- Use basic geographic information services (GIS) tools to collect and organize data
- Use information and communications technology (ICT) tools such as mobile phones and computers
- Understand and apply principles of customer relations and sales

A Certificate of Participation should be awarded to all trainees who successfully complete the program. Successful candidates would have attended no less than 90 percent of all sessions and satisfactorily complete tasks.

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- High school diploma
- Strong literacy and numeracy skills
- Strong critical thinking skills
- Basic knowledge about agricultural value chains
- The ability to use ICT tools

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Promising candidates for training may include:

- Young farmers and farm aides
- Rural, peri-urban, and urban youth (located through youth groups)
- 4H Club members
- Women (recruited through women's groups)
- Rural community development workers
- Extension officers
- Youth who have already completed entrepreneurship and basic ICT training programs

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- A B.S. in agriculture
- A minimum of 5 years' experience in the field, including professional experience with agricultural extension, marketing, or other relevant experience in agricultural value chains
- Experience with data collection, interpretation, and dissemination services

Trainers may be found at Agriculture Information Services Bureaus or Enterprises, Ministries of Agriculture (e.g., senior extension officers), agricultural research institutes, and agricultural colleges.

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES?

Training programs for agricultural information services agents should develop skill sets associated with those of an agriculture extension officer to make the trainee more effective and competitive in the job market. A key challenge with the data collection process is the issue of trust. Where data collectors are knowledgeable enough to offer farmers accurate advice, farmers are more likely to share and allow agriculture experts to capture data.

The training program should also expose students to key aspects of local agricultural value chains for leading crops and commodities in the area where they will work. Courses should include training on GIS, data management software, and mobile technologies as well as on aspects of entrepreneurship.

Although no internationally recognized curricula exist that are specific to training information services agents, there are numerous relevant agricultural training curricula available that can support a robust job-training program. The curricula resources described below cover the subject areas identified above in addition to others, and are available online at no cost.

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- Multimedia Production for Health

Skills Integration Exercises

- Integrating ICT Skills
- Integrating Life Skills
- Integrating Entrepreneurship Skills

Assessment: Kenya

Assessment: Rwanda

- World Agroforestry's Extension Guidelines

This extension guide offers crucial information and lessons about the improvement of fallows, which will broaden the trainees' knowledge base about the sector.

The Agroforestry Extension Guide for Kenya:

Extension Guide for Western Kenya

[Data Management World Agroforestry's Data Management Guide](#)

Data Analysis World Agroforestry [Pt. 1](#); [Pt. 2](#)

- FAO: A Guide to Maize Marketing for Extension Officers

This guide is designed for agriculture professionals who work with small-scale African farmers. It covers the skills needed to advise farmers about storing, pricing, and selling produce.

[English Version](#); [French Version](#)

[On-Farm Research Guide](#)

Developed for the Garden Institute of Alberta, Canada, this participatory guide details how and what agricultural data should be collected. It outlines simple qualitative and quantitative means of noting data and findings, as well as ideas to generate practical learning exercises.

- [World Agroforestry's Data Management Guide](#)

This resource consists of lecture notes, required resources, practice exercises, and a summary of key points for each module. It details how to design a spreadsheet for data management, how to organize and develop a data management strategy, as well as how to query a database for specific information. The guide is written primarily for a research or academic audience, but some of the principles and materials could be adapted for students.

- OER Africa: Farmer's Agribusiness Training Manual

This student-centered, five-module curriculum equips farmers and farmer organizations with the skills they need to transform their operations into efficient entrepreneurial ventures. This manual is distinguished by its focus on entrepreneurship and ICT skills for agriculture. The following core features of the curriculum will help trainees navigate the learning process:

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Skills Integration Exercises

- Integrating ICT Skills
- Integrating Life Skills
- Integrating Entrepreneurship Skills

Assessment: Kenya

Assessment: Rwanda

- Suggested time frame for lessons and tasks (these should be extended to allow extensive hands-on work and discussions)
- Lesson outcomes and a conclusion to help gauge learning outcomes
- Online and computer-based interactive supplementary resources and activities
- A feedback guide, glossary, and references

Agricultural Information Services Agents will also need strong sales and interpersonal skills (see the Agricultural Input Sales-people opportunity profile).

[Multimedia version](#); [Individual Module Outlines](#)

WHAT TECHNOLOGY IS NEEDED?

The following resources are needed to conduct a training program that includes computer-based modules:

- Computers (no more than 3 students per computer is preferable)
- Spreadsheet/database package
- Basic printer and a projector
- GIS Software
- Farm manual (for students)
- Training manual (designed based on curriculum resources for the trainer's use)
- Internet connection
- Mobile devices and data gathering software for mobile devices

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- Interactive, student-centered instruction
- Hands-on lessons
- Group work
- Practice gathering data
- Practice developing and marketing client services

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

The following job/internship placement strategies have been tested and have shown good results:



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Skills Integration Exercises

- Integrating ICT Skills
- Integrating Life Skills
- Integrating Entrepreneurship Skills

Assessment: Kenya

Assessment: Rwanda

- Invite potential employers to present their work to your students
- Integrate a career fair into your training program to bring employers into contact with your students
- Partner with established farms and farm suppliers for in-course internships
- Partner with farmer associations, cooperatives, and agricultural research institutes or universities engaged in research, where students can take on special projects and begin to market their services
- Partner with mobile phone service providers and networks

ADDITIONAL RESOURCES

Relevant ICT Case Studies:

- [Esoko](#)
- [Farm Radio](#)
- [M-Kilimo](#)
- [Voice-based services](#), two-way interactive services and SMS platforms

URLs

- Agroforestry Extension Guide for Kenya: http://www.worldagroforestrycentre.org/downloads/publications/PDFs/06_Agroforestry_extension_manual_for_kenya.pdf
- Arid Lands Information Network: <http://www.alin.net/>
- Data Analysis World Agroforestry
Pt. 1: <http://www.worldagroforestry.org/downloads/publications/PDFS/B12565.PDF>
Pt. 2 <http://www.worldagroforestrycentre.org/publications/publicationsdetails?node=45887>
- Data Management World Agroforestry's Data Management Guide: <http://www.worldagroforestrycentre.org/publications/publicationsdetails?node=45890>
- Esoko: <http://www.esoko.com/about/>
- Extension Guide for Western Kenya: <http://www.worldagroforestrycentre.org/publications/publicationsdetails?node=45453>
- FAO: A Guide to Maize Marketing for Extension Officers:
English Version: <http://www.fao.org/docrep/005/x0530e/X0530E01.htm>
French Version: <http://www.fao.org/DOCREP/004/X0530F/X0530F00.HTM>
- Farm Radio: <http://www.farmradio.org/>
- M-Kilimo (M-Agriculture): <http://www.m-kilimo.com/>
- M-Kilimo: <http://gsmworld.com/documents/m-kilimo-case-study-v3.pdf>

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Skills Integration Exercises

- Integrating ICT Skills
- Integrating Life Skills
- Integrating Entrepreneurship Skills

Assessment: Kenya

Assessment: Rwanda

- OER Africa: Farmer's Agribusiness Training Manual
Multimedia version: <http://www.oerafrica.org/FTPFolder/Agshare/Agribusiness/index.html>
Individual Module Outlines: <http://www.oerafrica.org/agricultureoer/AgricultureResources/tabid/1485/Default.aspx>
- On-Farm Research Guide: http://www.grassrootsolutions.com/pdf/On_Farm_Research_Guide_PDF.pdf
- Voice-based services, two-way interactive services, and SMS platforms: <http://www.kissankerala.net/mobile/index.jsp#mobile>
- World Agroforestry's Data Management Guide: <http://www.worldagroforestrycentre.org/publications/publicationsdetails?node=45890>

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Skills Integration Exercises

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- Integrating Entrepreneurship Skills

Assessment: Kenya

Assessment: Rwanda

WHAT DO ORGANIC FARMERS DO?

Certified organic farmers produce food using sustainable methods that exploit the benefits of the natural environment and deliberately exclude the use of synthetic agrochemicals, such as fertilizers and dyes.

WHAT IS THE EMPLOYMENT OUTLOOK FOR ORGANIC FARMERS?

Low-input and organic farming remains the hallmark of farming practices in much of Africa, including Rwanda and Kenya. There is growing demand for organic produce because of its health and environmental advantages. Expanding local, regional, and export markets for organic produce creates opportunities for youth across East Africa to make and sustain livelihoods through self-employment and gainful jobs with commercial farms, cooperatives, and agribusinesses along the value chain.

Organic farmers who are certified will benefit most from the growing demand for high quality organic foods. The certification process is crucial to maintain the authenticity of the sector.

Mount Kenya Organic Farm (MOOF) was founded in 1998 by Peter Murange following a 10-month training program offered by the United Kingdom-based charity, Garden Organic. Murange's training included a 5-month internship. MOOF also provides information and advice to disadvantaged farmers, improving community food security, health, and livelihoods. MOOF may be contacted at 254(0) 733664103 (cell), 254(0) 6231187 or at moofafrica@today.co.ke

WHAT IS THE BIG PICTURE?

Recommended training location	Rural or peri-urban areas
Target beneficiaries	Youth interested in agriculture
Average length of course	6–8 months
Maximum class size	35
Other considerations	The duration of the program should be split so that students spend the majority of their time in on-farm practical training. Although a 5-day training week is appropriate for the classroom portion of training, a 6-day training week during the practicum period is more reflective of the realities of this profession.

Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for employment.

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Assessment: Kenya

Assessment: Rwanda

WHAT ARE THE TRAINING OUTCOMES?

At the end of the training period, students should be able to:

- Understand, follow, and discuss contemporary issues in the agricultural sector
- Manage various aspects of production on an organic farm, including working on a farm team and responding to common challenges (soil quality, pests, disease, changing weather patterns)
- Use basic ICTs (cellphones and radio) to improve farm operations and marketing
- Understand and manage the business side of an organic farm, including writing a business plan, developing budgets and managing costs, making production projections, maintaining and replacing equipment and supplies, and marketing

Students should be given a certificate of completion. In addition, to be officially recognized, students should be encouraged to seek certification as an organic producer from the local certifying authority. Certification should be sought 1–2 years after training. This allows sufficient time for the trainee to apply the skills they have learned, boosting their chances of satisfying the requirements for organic certification. Certification is primarily necessary for farmers interested in tapping into the export market.

In addition to certification, farm-to-fork traceability, a system that tracks the supply chain of a food product from farm, to packager, exporter, and retail, has placed an additional set of data collection activities for farms who want to sell to global markets such as the European Union. Though there are custom software packages specifically designed for farm-to-fork traceability, tracking activities such as using fertilizer use, water usage, and other parameters for sustainable or organic practices on a daily, weekly or monthly basis with tools such as Microsoft Excel prepare youth for use of more advanced systems.

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- Primary education
- Strong functional literacy and numeracy
- Strong interest in agriculture

Promising candidates for training may include:

- Untrained farmers and farm aides
- Rural and urban youth (located through youth groups)
- 4H Club members
- Women (recruited through women's groups)
- Rural community development workers
- Extension officers

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Skills Integration Exercises

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- Integrating Entrepreneurship Skills

Assessment: Kenya

Assessment: Rwanda

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- A diploma in organic agriculture or related subject from an accredited institution
- A minimum of 5 years' experience as a successful and certified non-subsistence level organic farmer

Recommended skills include:

- Knowledge of agribusiness and marketing of organic products

Trainers may be located through national organic institutes, agriculture ministries, agriculture colleges, and organic farmers associations.

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

A highly interactive and intensive organic farming training program should expose students to the following core topics, tailored to prevailing labor market demands and the capability of youth:

- Field and horticultural crops
- Livestock production and health
- Pest management
- Soil fertility management
- Basic farm management
- Farm accounting and marketing
- Interpersonal skills and group dynamics (including how to interview, make a sales pitch, handle crises, manage disgruntled customers and suppliers, and the like)

When selecting a curriculum for training, implementing organizations should consider how well the material responds to local industry demands and the needs of learners. Many organic training resources are available; however, the most effective and widely used resources are based upon the International Federation of Organic Agriculture Movements' (IFOAM) training manuals. Some IFOAM manuals are available for free. These are highly recommended resources, and key features are described below.

IFOAM-Related Materials

- IFOAM Training Manual for [Organic Agriculture in the Tropics](#); Theory, Transparencies and Didactic Approach (€60)
- IFOAM Training Manual for [Organic Agriculture in the Arid and Semi-Arid Tropics](#); Theory, Transparencies and Didactic Approach (no charge)

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Skills Integration Exercises

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Assessment: Kenya

Assessment: Rwanda

This manual (one version for the tropics and another version for arid and semi-arid tropics) describes how to structure an organic farm training course or workshop and provides material and ideas for trainers. The manual also serves as a handbook for those who want to get a clearer idea about the basics of organic farming. The manual details the principles of organic agriculture; soil fertility; plant nutrition; pest, disease, and weed management; animal husbandry; and farm economy.

- [Kenya Organic Associations](#)

Kenyan Institute of Agriculture (KIOA) offers a number of short courses relating to organic farming (courses 1–5). The courses are not available online, but the course descriptions, requirements, topics and sub-topics are listed online and should help program managers craft a comprehensive curriculum.

- Garden Organic

The UK charity, Garden Organic, has produced a range of resources based on its work in Kenya. These resources are available in Swahili and English. Topics include composting in the tropics, green manure, and natural pests, disease and weed control.

- [Composting in the Tropics I](#)-English version (PDF)
- [Composting in the Tropics I - Kiswahili version](#)(PDF)
- [Composting in the Tropics II](#) -English (PDF)
- [Composting in the Tropics II - Kiswahili version](#) (PDF)
- [Green Manures / Cover Crops](#) -English (PDF)
- [Green Manures / Cover Crops - Kiswahili version](#) (PDF)
- [Better Manure, Better Crop – English only](#)

- The Backpack Farm (BPF) Agriculture Program—Kuza 2011 [Training Manual](#)

This five-phase, eight-chapter manual covers a range of key topics in organic farming, including soils, crop rotation, water management, pests, diseases, harvest, recordkeeping, and sanitation. BPF is focused on providing “green” agri-tech, training, and extension services across East Africa.

Natural Pest, Disease and Weed Control

- Natural Pest and Disease Control
- Natural Pest and Disease Control — Kiswahili version (PDF)
- Termite control without chemicals — English (PDF)

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- Multimedia Production for Health

Skills Integration Exercises

- Integrating ICT Skills
- Integrating Life Skills
- Integrating Entrepreneurship Skills

Assessment: Kenya

Assessment: Rwanda

- Termite control without chemicals — Kiswahili version (PDF)
- The Neem Tree, English (PDF)
- The Neem Tree, Kiswahili version (PDF)
- Weed Control, English (PDF)

Agribusiness and Farm Management

- OER Africa: Farmer's Agribusiness Training Manual
[Multimedia version](#); [Individual Module Outlines](#)

This student-centered, five-module curriculum equips farmers and farmer organizations with the skills they need to transform their operations into organized and efficient entrepreneurial ventures. The core features of the curriculum that will help training managers are the suggested time frame for lessons and tasks (these should be extended to allow extensive practicums and discussions), lesson outcomes, online and CD ROM-based interactive supplementary resources, activities, a feedback guide, glossary, a conclusion to help gauge learning outcomes, and references. The ICT-based nature of OER Africa's training guide is a distinguishing feature.

- [Extension Portal](#)

This portal, supported by a network of U.S. land grant universities with expertise in agriculture, covers a range of topics relating to agriculture. The organic agriculture section covers the basics of tillage in organic farming systems, soil and fertility management, weed management, and plant and disease management, among other pertinent topics.

A program manager should adapt the resources to trainees' particular knowledge gaps, assessed through an initial oral or written assessment.

Students should work in small groups of around five to allow everyone to participate in group discussions, observations and skills sharing.

WHAT TECHNOLOGY IS NEEDED?

The following resources are needed to conduct training in organic farming:

- Computers (maximum 3 students per computer), computer software
- Internet connection

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Skills Integration Exercises

- Integrating ICT Skills
- Integrating Life Skills
- Integrating Entrepreneurship Skills

Assessment: Kenya

Assessment: Rwanda

- Printer
- Projector
- A farm manual for students (national organic farm associations have localized IFOAM resources and should be contacted for those resources)
- Training manuals (IFOAM manuals and a mixture of topics drawn from resources listed)
- Handheld computing devices and mobile phones
- Access to farms for practical training

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- A participatory learning environment, where group discussion and the use of visual learning materials are commonplace
- Activities that develop teamwork skills, which are central to successful organic farms
- Hands-on activities
- On-farm practicums that exposes students to timeliness of operations, teamwork, pricing, customer relations and other business aspects of organic farming
- Mentoring
- Visits by the program manager to farms to observe students' acquisition of practical skills and ability to work effectively in teams

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

Training providers may find it useful to:

- Invite potential employers to present their work to students
- Integrate a career fair into the training program to bring employers into contact with students
- Partner with established organic farms and organic farm suppliers of varied sizes for internships
- Arrange for students to work at or provide services to organic research institutes, organic farm associations, organic restaurants, and organic input suppliers
- Seek partnerships for further training and jobs via Kenya Organic Agriculture Network and emerging Rwandan groups

ADDITIONAL RESOURCES

[Kenya Institute of Organic Farming \(KIOF\)](#)

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Skills Integration Exercises

- Integrating ICT Skills
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Assessment: Kenya

Assessment: Rwanda

This NGO operating in East Africa offers a number of organic farming training resources, including the following books:

- Field Notes on Organic Farming, 1990, Njoroge, 1994
- Organic Farming: A Textbook on Post-Secondary Education, Njoroge and Manu, 1999.

Sources of organic farm certification in Kenya and Rwanda

Rwanda	Kenya
<p>CERES Rwanda P.O. Box 2646 Kigali, Rwanda Phone: +250-08225928 E-Mail: ceres-rwanda@ceres-cert.com</p>	<p>Africert Ltd P.O. Box 74696 Nairobi, Kenya Phone: + 254-020-828 857 Fax: + 254-020-828 859 Email: rnyagah@afrcert.co.ke</p>
<p>Ecocert-Bureau Madagascar / East Africa Villa Arimanantsoa – Lot V A 4 J Ampasanimalo 101 Antananarivo Madagascar Phone: + 261 33 02 01 998 Fax: + 261 20 22 54864 Email: office.madagascar@ecocert.com</p>	<p>Ecocert-Bureau Madagascar / East Africa Villa Arimanantsoa – Lot V A 4 J Ampasanimalo 101 Antananarivo Madagascar Phone: + 261 33 02 01 998 Fax: + 261 20 22 54864 Email: office.madagascar@ecocert.com</p>
	<p>EnCert Ltd P.O. Box 74510 00200 Nairobi, Kenya Contact: Musa Njoka Phone: + 254-724-910 240 Email: musanjoka@yahoo.com</p>

URLs

- Backpack Farm (BPF) Agriculture Program—Kuza 2011 Training Manual: <http://backpackfarm.com/site/1075kris/BPFKuzaTraining2011.pdf>

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Skills Integration Exercises

- Integrating ICT Skills
- Integrating Life Skills
- Integrating Entrepreneurship Skills

Assessment: Kenya

Assessment: Rwanda

- Extension Portal: <http://www.extension.org/pages/18674/introduction-to-organic-agriculture>
- IFOAM Training Manual for Organic Agriculture in the Arid and Semi-Arid Tropics: http://www.sippo.ch/internet/osec/en/home/import/publications/food.-ContentSlot-99368-ItemList-70182-File.File.pdf/pub_food_ifoam.pdf
- IFOAM Training Manual for Organic Agriculture in the Tropics: http://shop.ifoam.org/bookstore/index.php?cPath=64_68_35
- Kenya Institute of Organic Farming (KIOF): <http://www.kiof.org/>
- Kenya Organic Associations: <http://www.kiof.org/docs/kiofcourses.pdf>
- Natural Pest, Disease and Weed Control
 - Natural Pest and Disease Control: http://www.gardenorganic.org.uk/pdfs/international_programme/PestDisease.pdf
 - Natural Pest and Disease Control - Kiswahili version: http://www.gardenorganic.org.uk/pdfs/international_programme/KiswahiliNaturalPestandDiseaseControl.pdf
 - Termite control without chemicals –English: http://www.gardenorganic.org.uk/pdfs/international_programme/Termite.pdf
 - Termite control without chemicals - Kiswahili version: http://www.gardenorganic.org.uk/pdfs/international_programme/KiswahiliTermiteControl.pdf
 - The Neem Tree –English: http://www.gardenorganic.org.uk/pdfs/international_programme/NeemTree.pdf
 - The Neem Tree - Kiswahili version: http://www.gardenorganic.org.uk/pdfs/international_programme/KiswahiliNeem.pdf
 - Weed Control: http://www.gardenorganic.org.uk/pdfs/international_programme/Weed.pdf
- OER Africa: Farmer's Agribusiness Training Manual:
 - Multimedia-<http://www.oerafrica.org/FTPFolder/Agshare/Agribusiness/index.html>
 - Individual Module Outlines-<http://www.oerafrica.org/agricultureoer/AgricultureResources/tabid/1485/Default.aspxw>

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Skills Integration Exercises

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Assessment: Kenya

Assessment: Rwanda

WHAT DO AGRICULTURAL INPUT SALESPEOPLE DO?

Agricultural input salespeople sell products used in all agricultural activities, from chemicals to equipment and machines. Chemicals include fertilizers, herbicides, insecticides, and pesticides, as well as hormones and drugs for preventing animal diseases. Machinery and equipment range from simple tools to tractors and the like.

WHAT IS THE EMPLOYMENT OUTLOOK FOR AGRICULTURAL INPUT SALESPEOPLE?

The services of agro-input dealers are critical to farmers' access to affordable quantities of appropriate farm inputs. The majority of the farm input supply companies remain concentrated in urban areas or rural commercial centers. As a result, millions of small-scale farmers in rural areas do not have access to affordable agricultural inputs. Agro-input dealers who specialize in mineral fertilizers are in greatest demand. This presents an entrepreneurial opportunity for youth to be trained as agriculture input salespeople.

Trained agricultural input salespeople may also form networks or cooperatives to provide their services to underserved farmers through community-based networks, allowing them to consolidate costs for delivery to farmers in rural clusters.

[KENFAP Services Limited \(KSL\)](#) was established in 2004 by the Kenya National Federation of Agricultural Producers (KENFAP). It is a highly structured farm input supplier that specializes in fertilizers, pesticides, seeds, animal feeds and drugs, artificial insemination, and the provision of consultancy services at point of sale and on the farm. Key features KSL include accessibility through its twelve outlets in rural communities, partnership with national seeds organizations, and bulk purchasing of agricultural input supplies.

WHAT IS THE BIG PICTURE?

Recommended training location	Rural or urban areas
Target beneficiaries	Youth with secondary education and interest in agriculture; prior sales experience helpful.
Average length of course	Approximately 3 months (100 hours)
Maximum class size	40
Other considerations	The existing curricula in Rwanda and Kenya generally do not offer this specialized training. Agriculture is no longer a compulsory subject in either country, so many secondary graduates have not had exposure to topics in agriculture or sales.

Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for employment.

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Assessment: Kenya

Assessment: Rwanda

WHAT ARE THE TRAINING OUTCOMES?

The training program prepares youth to function as effective providers of agronomic services and products to client farmers. Ag-input sales professionals have an economic incentive to advise farmers: the better they are at providing a range of advice and services, the better they will be at retaining their client base. Upon successful completion of training, students will be able to:

- Provide accurate information, advice, and services to clients related to improved seeds, fertilizers, and agro-chemicals
- Identify, verify quality and efficacy, and promote new products and services
- Maintain accurate records for credit-based sales and collections (65%–80% of sales in agricultural input are offered on some form of credit)
- Perform basic bookkeeping and recordkeeping
- Perform field scouting to identify local weeds as well as disease and nutritional deficiencies in plants and soils
- Manage client relations
- Coordinate and facilitate meetings between growers and sellers
- Price goods and manage delivery logistics
- Use mobile phones to access agricultural market information and to maintain client relations

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- High school diploma (at minimum)
- Strong functional literacy and numeracy skills
- Strong interest in developing a career in agriculture
- Ability to work independently or in a team

Recommended:

- Strong interest and ties to rural and peri-urban areas

Promising candidates for training may include:

- Untrained farmers and farm aides
- Rural and urban youth (located through youth groups)
- 4H Club members
- Women (recruited through women's groups)
- Rural community development workers
- Extension officers

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Assessment: Kenya

Assessment: Rwanda

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- Formal training in agriculture, such as a bachelor's degree, diploma in agriculture, or a related agribusiness diploma. (A senior extension officer in the Agriculture Ministry would be an appropriate candidate.)
- Minimum of 3 years' experience in sales, preferably with an agro-dealer.

Recommended skills include:

- Agricultural sales experience

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

Agricultural input sales training programs should cover modules such as managing business relations, sales and marketing (including the role of mobile-based technology in these functions), fertilizers and seeds, bookkeeping, costing and pricing, stock/inventory management, and managing working capital. Below is a list of training resources with details about each.

- [FAO Marketing Training Manual](#)
This resource has nine modules, including a framework for trainees to develop individual action plans. It includes lessons and activities in a workshop format. It covers how to use and interpret market information, manage risks, and design marketing plans. The resource is available online at no cost.
- OER Africa's Farmer's Agribusiness Training Manual
This five-module curriculum equips farmers and farmer organizations with the skills they need to transform their operations into efficient entrepreneurial ventures. This manual is distinguished by its focus on entrepreneurship and ICT skills for agriculture.
[Multimedia version](#); [Individual Module Outlines](#)
- Just Sell's "[Sales Management Checklist](#)" and "[Sales Negotiation Guide](#)"
These resources detail the fundamentals of sales, including setting goals, understanding credit, sales communication, and managing external relations among customers, competitors, and partners.
- [Informal Sector Business Institute \(ISBI\)](#)
ISBI's salesmanship training course totals 200 hours over a period of 33 days. The course covers how to manage people, managerial roles, personal effectiveness, delegation, effective leadership, and teamwork.
- [African Centre for Women, Information and Communications Technology \(ACWICT\)](#)
ACWICT offers a sales and marketing course designed to be delivered in 40 hours over 10 days. Topics include Customer service and relations, Brand Management, Public relations, Creativity in advertising, E-marketing, and more.
- [ACS Sales Training Course](#)

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Assessment: Kenya

Assessment: Rwanda

This skills course is designed to produce competitive sales professionals. There is a fee for the lessons, although the aims of each lesson are available at no cost.

WHAT TECHNOLOGY IS NEEDED?

The following resources are needed to conduct a training program that includes computer-based modules:

- Computer
- Projector
- Printer
- Internet connection
- Training Manuals
- Handbooks related to:
 - Agro-chemicals
 - Farm mechanization
 - Organic farming
 - Horticulture
 - Animal Husbandry

Handbooks may be found at the Ministry of Agriculture and specialty bookstores.

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

The resources identified above are designed primarily for classroom settings and are geared toward skills building. Optimal instruction includes:

- Interactive group work and skills sharing
- Opportunities to apply learning in a practical setting
- Role-playing
- Activities that promote critical thinking
- Activities that develop interpersonal skills
- Visits to farms and agro-dealers in which students can interact with professionals and potential customers, farmers, and brokers

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Assessment: Kenya

Assessment: Rwanda

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

The following job/internship placement strategies have been tested and have shown good results:

- Arrange for trainees to work with seed suppliers, such as Kenmex Seed Merchants, Kenya Forestry Seed Centre, Kenya Seed Company; Direction de l'Environnement, Centrale des Graines Forestieres, and Rwanda Agro-dealer Development (in Rwanda)
- Partner with AGMARK, Kenya's Agriculture Market Development Trust. AGMARK develops agriculture input supply lines and access to markets
- Invite potential employers to present their work to your students
- Include a tour of an agro-dealer
- Integrate a career fair into your training program; this brings employers into contact with your students, offering opportunities for networking

ADDITIONAL RESOURCES

- The Kenya-based Citizens Network for Foreign Affairs (CNFA) Agrodealer Model Training Course, a six-module training program on working capital, inventory control, marketing, record keeping, costing, pricing, and managing business relations. Kenyan Office: fchabari@cnfakenya.org; Regional Office: mgummo@cnfa.org
- The Rockefeller Foundation funded a program that develops rural agricultural input supply systems for farmers in Africa (Malawi, Kenya, and Uganda). Contact organization: Agricultural Market Development Trust (AGMARK) for work in Kenya. Kenyan Office: fchabari@cnfakenya.org; Regional Office: mgummo@cnfa.org

URLs

- ACS's Sales Training Course: <http://www.acseduonline.com/courses/product.aspx?id=414>
- ACWICT: <http://www.acwict.org/>
- FAO Marketing Training Manual: <http://www.fao.org/sd/erp/toolkit/Books/Marketing.pdf>
- ISBI: <http://www.eitkenya.org/>
- KENFAP Services Limited (KSL): http://www.kenfapervices.co.ke/index.php?option=com_content&task=view&id=39&Itemid=27
- OER Africa's Farmer's Agribusiness Training Manual:
Multimedia version: <http://www.oerafrica.org/FTPFolder/Agshare/Agribusiness/index.html>
Individual Module Outlines: <http://www.oerafrica.org/agricultureoer/AgricultureResources/tabid/1485/Default.aspx>
- Sales Management Checklist: http://www.justsell.com/wpcontent/themes/justsell/pdf/tools/sales_mgmt.pdf
- Sales Negotiation Guide: http://www.justsell.com/wpcontent/themes/justsell/pdf/tools/negotiation_guide.pdf

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Assessment: Kenya

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WHAT DO STOREKEEPERS/INVENTORY OFFICERS DO IN THE AGRICULTURAL SECTOR?

Storekeepers and inventory officers generally perform administrative tasks, such as documenting the transactions of an establishment, making and tracking sales, and managing and replenishing stock. In the agricultural sector, storekeepers or agro-dealers sell products and advise customers on how to best use them.

WHAT IS THE EMPLOYMENT OUTLOOK FOR STOREKEEPERS/INVENTORY OFFICERS?

As more farmers move from subsistence farming to commercial ventures, their need for administrative support services grows. Administrative tasks are central to the operation of agricultural vendors and retailers. Administrative services include storekeeping, record keeping and bookkeeping, and managing stock. These services are needed primarily in commercial farming areas, where agro-dealers are concentrated. As the agro-dealer market responds to the needs of small-scale farmers seeking to expand their businesses, more of these operations will emerge in underserved rural areas.

[Woman storekeeper boosts Malawi farming](#)

With credit from the Citizens Network for Foreign Affairs (CNFA) in Malawi, Dinnah Kapiza (58) established her own business selling agricultural supplies and products, such as fertilizers, to local farmers. She also instructs customers on how to use the products.

From Africa Renewal, 20(4), January 2007.

WHAT IS THE BIG PICTURE?

Recommended training location	Rural
Target beneficiaries	Young farmers or farm aids, 4H club members, rural community development workers, extension officers. Recent school leavers or youth who have completed secondary school.
Average length of course	600 hours (20–24 weeks)
Maximum class size	20

Training in English language skills, life skills, and job-seeking skills is also recommended to increase opportunities for employment.

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WHAT ARE THE TRAINING OUTCOMES?

Students who successfully complete the program will be able to:

- Provide farmers with credible information and advice regarding improved seeds, chemical fertilizers, and other agro-chemicals and their use
- Manage a farm store, office, and inventory using Excel, Access, Quickbooks or other financial management software
- Understand the principles and perform accurate bookkeeping and record keeping functions using standard procedures, computer software, and booklets
- Manage expectations and relations with customers and suppliers

Trainees should be awarded a certificate detailing the nature of their training.

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- Basic literacy skills
- Basic numeracy and math skills
- Basic computer/ICT skills

Young people who lack basic computer skills may acquire it through a service provider, such as the International Computer Driving License: <http://www.icdl.org.za/centres.php>. In addition, Microsoft's Digital Literacy training can be easily accessed by qualified NGOs at no cost.

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- A diploma in bookkeeping and accounting
- A minimum of 3 years' experience as an agribusiness manager or farm manager

Potential trainers may be found at established co-ops, agriculture colleges, co-op institutes and colleges, and rural agricultural development agencies.

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

The full range of administrative skills and functions should be taught to students to offer greater flexibility, choice, and employability. The curricula for the various tasks to be performed by administrative personnel provide further details about how to structure the training as-

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pects. For example, duration of the training should be adjusted to adequately respond to the training needs of youth, which may vary by cohort.

An effective curriculum for training youth to be storekeepers and inventory officers in the agriculture sector is described in the table below.

Storekeeper and Inventory Officer Training Program Curriculum

Training Design	Topics	Number of weeks
Foundation Courses	IT Essentials: A review of basic computer skills and exposure to advanced IT topics, including computer hardware and software, which should be built upon during the inventory management and bookkeeping modules.	3
	Life skills	2
	Introduction to Basic Advisory Services: An overview of widely used agro-products, their quality, advantages and disadvantages, cost and use. This module on product knowledge development should include information about commonly used and recommended seeds, fertilizers, and other inputs and tools. Products change over time with technology and contextual factors, so this should be based on what course is most appropriate for the local context.	1
Essentials of Store-keeping	<ul style="list-style-type: none">• Introduction to weights and measures for goods received or issued• Stocking goods according to lists generated by inventory system• Unpacking incoming goods, wrapping and packing outgoing goods	3
Administrative Skills	<ul style="list-style-type: none">• Introduction to basic accounting and bookkeeping (purchasing, sales, accounts receivable/payable, bank reconciliation, and basic accounting principles, and record keeping)• Microsoft Excel and ledger books	4
Inventory Management	<ul style="list-style-type: none">• Introduction to Access for inventory management• Building an Access inventory management database• Using Excel to create and track a supply list• Creating inventory lists, including line items, using Excel	10

Below is a list of resources that may be used to prepare trainees with the skills necessary for gaining employment as a storekeeper or inventory officer.

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Foundation Resources

- [Agricultural Cooperative Development](#)

This FAO Manual for Trainers includes several communication exercises designed to teach the basic soft skills required to effectively manage an agricultural co-op. The manual is intended as a resource for training trainers and co-op managers and is not designed to be used as an instructional guide. It emphasizes decision-making based on community appraisal and provides guidance on accounting and managing credit, training that will be useful for a shopkeeper.

- **OER Africa: Farmer's Agribusiness Training Manual**

 - [Multimedia version, Individual Module Outlines](#)

This student-centered, five-module curriculum was designed by OER Africa to equip farmers and farmer organizations with the skills they need to transform their operations into organized and efficient entrepreneurial ventures. Module 4, Lesson 1 provides a sound introduction to ICT tools in support of agriculture, including an introduction to computers, record keeping with Excel, and training tools on how to search and retrieve specific information from databases (e.g., inventories). There is also a CD-ROM with interactive supplementary resources.

- **British Columbia Ministry of Agriculture:** [Business Management Resources](#)

These templates (in PDF and Excel format) include detailed information on developing agricultural enterprise business plans. Topics include planning for-profit enterprise budgets and Excel worksheets, business plan guides, labor management & human resources, cooperative business structure, partnerships and leases, succession & estate planning, and information management & technology.

- **Sustainable Agriculture Research and Education:** [Building A Sustainable Business](#)

This site provides sample worksheets that illustrate how farm families set goals, researched processing alternatives, determined potential markets, and evaluated financing options. Blank worksheets help the reader develop a detailed, lender-ready business plan or map out strategies to take advantage of new opportunities.

Administrative Skills

- [FAO: Farm Management Manual](#)

This resource is part of the FAO analytical toolkit. It is user-friendly, offering prescribed outcomes for each lesson, suggested duration, detailed teaching methods, and a lecture guide on concepts, including examples of how to apply these concepts. The administrative sections of this guide, including farm record keeping, will be particularly useful.

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- **A Facilitator's Guide:** [FAO's Guide for Simple Bookkeeping and Business Management](#)

This 5-month training program is a follow-up to a guide for farmers who already have basic literacy and numeracy skills. This course tackles the fundamentals of bookkeeping in a user-friendly manner appropriate for small scale entrepreneurs. It also draws on previous work done in the Africa region to train more women in business management.

Inventory Management

- [Family Computer Club](#)

This video explains in detail how to use Excel to manage a reasonably robust inventory management system for a small business. The video is illustrative in nature and uses a voiceover to explain each step.

- [Microsoft Office](#)

Microsoft provides a range of learning resources free of charge, including templates to help guide students through the process of identifying and implementing inventory strategies for their business or employer. Below are four Excel and Access templates that will make learning how to track and manage inventory easier for students:

- [Create an Access database](#)

This article details how to design and create an inventory management database.

- [Supplier list \(8 1/2 x 14, landscape\)](#)

This Excel template allows users to easily keep track of suppliers.

- [Inventory management database](#)

This Access template is the foundation for developing an inventory management database.

- [Inventory list](#)

This Excel inventory template allows users to create a line-item list of their entire inventory.

- **Citizens Network for Foreign Affairs (CNFA) Agrodealer Model Training Course**

Kenyan Office: fchabari@cnfakenya.org

Regional Office: mgummo@cnfa.org

This is a six-module program on working capital, but the modules on record keeping, business management skills, and managing business relations may be useful.

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Assessment: Kenya

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WHAT TECHNOLOGY IS NEEDED?

- 20 computers
- Internet connection
- Computer Programs (Excel, Access, Quick Books, or other spreadsheet, accounting, or database software)
- Projector
- Printer
- Training manuals (to be designed for the trainer using the curricular resources provided and informed by local labor and agricultural imperatives)
- Agriculture Extension guidelines
- Accounting books

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- Hands-on projects and assignments
- Peer dialogue, brainstorming, and problem-solving activities
- Interactive discussions and group projects (groups of 5–10 participants)
- Homework assignments that include accounting and recordkeeping exercises
- Reviewing case studies to sharpen analytical and decision-making skills
- Activities that encourage learners to extend and adapt the ideas introduced in the course to their own environment
- Guest lecturers from successful cooperative farmers and store owners

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

Training providers may find it useful to:

- Partner with local or regional warehousing companies, cooperatives, farm stores and agro-dealers to have students perform inventory control functions as a program project or internship
- Invite potential employers to present their work to students
- Integrate a career fair into your training program to bring employers into contact with students, creating good exposure and opportunities for networking

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URLs

- Agricultural Cooperative Development: [http://www.acdivoca.org/acdivoca/CoopLib.nsf/dfafe3e324466c3785256d-96004f15a8/e29c7067e455f46585256f0200504cfa/\\$FILE/Agricultural%20Cooperative%20Dev_Manual_for_Trainers.pdf](http://www.acdivoca.org/acdivoca/CoopLib.nsf/dfafe3e324466c3785256d-96004f15a8/e29c7067e455f46585256f0200504cfa/$FILE/Agricultural%20Cooperative%20Dev_Manual_for_Trainers.pdf)
- British Columbia Ministry of Agriculture: Business Management Resources: www.agf.gov.bc.ca/busmgmt/
- Create an Access database: <http://office.microsoft.com/en-us/excel-help/redirect/HP005187442.aspx?CTT=5&origin=HA001123097>
- Facilitator's Guide: FAO's Guide for Simple Bookkeeping and Business Management: www.fao.org/sd/erp/toolkit/Binary-DownloaderServlet.pdf
- Family Computer Club: www.familycomputerclub.com/excel/How-to-manage-inventory-in-Excel.html
- FAO: Farm Management Manual: www.fao.org/sd/erp/toolkit/Books/Farm_Management.pdf
- Inventory list: <http://office.microsoft.com/en-us/excel-help/redirect/TC006082717.aspx?CTT=5&origin=HA001123097>
- Inventory management database: <http://office.microsoft.com/en-us/excel-help/redirect/TC001018458.aspx?CTT=5&origin=HA001123097>
- Microsoft Office: <http://office.microsoft.com/en-us/excel-help/managing-inventory-HA001123097.aspx>
- OER Africa: Farmer's Agribusiness Training Manual: Multimedia-<http://www.oerafrica.org/FTPFolder/Agshare/Agribusiness/index.html> Individual Module Outlines <http://www.oerafrica.org/agricultureoer/AgricultureResources/tabid/1485/Default.aspx>
- Supplier list (8 1/2 x 14, landscape): <http://office.microsoft.com/en-us/excel-help/redirect/TC006082725.aspx?CTT=5&origin=HA001123097>
- Sustainable Agriculture Research and Education: Building A Sustainable Business: <http://www.sare.org/Learning-Center/Books/Building-a-Sustainable-Business>
- Women storekeeper booster Malawi farming: <http://www.un.org/ecosocdev/geninfo/afrec/vol20no4/204-malawi-woman-storekeeper.html>

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Assessment: Kenya

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WHAT DO PRODUCTION ASSISTANTS/JUNIOR PRODUCTION MANAGERS DO?

A production assistant helps to ensure the smooth functioning of all aspects of farm operations or of the production of a particular crop or livestock.

WHAT IS THE EMPLOYMENT OUTLOOK FOR PRODUCTION ASSISTANTS/JUNIOR PRODUCTION MANAGERS?

The demand for well-trained production assistants is greatest in rural areas, where large and mid-sized commercial and cooperative farms are concentrated. The skill set of production assistants is also in demand by agro-dealers and agricultural retailers in both rural and urban settings.

The work of a production assistant is crucial for a farm to achieve its maximum production of crops and livestock in the most economically and environmentally sustainable manner. A production assistant is often supervised by a production manager or farm manager.

WHAT IS THE BIG PICTURE?

Recommended training location	Rural areas
Target beneficiaries	Flexible, but the course must be tailored to meet the needs of each cohort of learners.
Average length of course	12–15 weeks (450 hours),
Maximum class size	35
Other considerations	Comprehensive cooperative training and education policies are yet to emerge in Kenya and Rwanda, although Kenya is slated to formulate a strategy. Therefore, the training should supplement the cohort's prior education and align with emerging trends for cooperative training and education in the country of training.

Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for employment.

WHAT ARE THE TRAINING OUTCOMES?

The training program should prepare students with agronomic (crop and soil) and livestock knowledge and hands-on practices. By the end of training, students should be able to:

- Understand and apply extensive knowledge of agronomy and livestock management, including the use of improved seeds,

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Assessment: Kenya

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- chemical and organic fertilizers, and herbicides and pesticides needed to help farmers raise their farm productivity
- Understand the costs of production and marketing and assist in the preparation of budgets and projections
 - Collect and analyze production data to make market forecasts
 - Assist in the management of other farm workers and ensure the farm operations run smoothly
 - Understand and implement applicable health and safety standards
 - Manage customer/supplier relations
 - Manage record keeping, bookkeeping, and a variety of information

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- A strong interest in agriculture
- Basic literacy skills
- Basic numeracy skills

Recommended:

- Diploma in Agricultural Science or high school diploma with two or more years of experience working on a farm
- Computer literacy

Target beneficiaries can be recruited from 4H Clubs, rural community development projects, youth extension offices, farmer associations, and agriculture colleges.

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- A diploma in agricultural science
- Experience as a senior extension officer, an established farm manager or production manager with at least 3 years' experience

Trainers may be found via national extension services (Ministry of Agriculture), farm managers associations, farmer associations, co-operatives, and agricultural colleges.

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

No formal training program exists for production assistants, but a number of post-secondary options do exist.

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Assessment: Kenya

Assessment: Rwanda

The training should cover production in farm operations and the principles of business for a farm operation (how to manage credit from suppliers and to customers, cash flow, pricing and profit-making, etc.). Because crops vary by region, the curriculum should reflect local farming needs and requirements.

Having selected the regional focus, the lessons should include the following:

Production	Farm Management	Information Systems and ICT Applications for Agriculture
<ul style="list-style-type: none">• Forage production• Soil Conservation• Tillage• Compost making (for soil fertility)• Manure Crop production/rotation• Fertilizer• Water Harvesting• Livestock breeding, production and management• Integrated Pest Management	<ul style="list-style-type: none">• Agribusiness:<ul style="list-style-type: none">– Managing credit– Marketing• Manual record keeping• Manual bookkeeping and accounting	<ul style="list-style-type: none">• Introduction to ICT for agriculture:<ul style="list-style-type: none">– Market information systems• Mobile-phone• Computers• Record keeping• Bookkeeping and basic accounting

The following curricula and other resources are available online at no cost:

Production

- [International Federation of Organic Agriculture Movements Training Material for Organic Agriculture](#)
This comprehensive training resource covers topics such as soil fertility, plant cultivation and nutrition, pest and disease management, animal husbandry, and quality assurance.
- [The Backpack Farm \(BPF\) Agriculture Program—Kuza 2011 Training Manual](#)
This five-phase, eight-chapter manual covers a range of key topics in organic farming, including soils, crop rotation, water management, pests, diseases, harvest, recordkeeping, and sanitation. BPF is focused on providing “green” agri-tech, training, and extension services across East Africa.

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Assessment: Kenya

Assessment: Rwanda

- [*The International Livestock Centre for Africa Forage Seed Production Training Manual*](#)

This practical guide covers the basic principles of quality forage seed production and marketing. It also covers the use of fertilizers and crop management.

- [*FAO Training Guide in Animal Husbandry*](#)

This training guide was designed by PENHA with funding from the FAO in response to farmers' request for livestock training. Consequently, a facilitation model is adopted, in which discussion and consensus building are defining features. The guide provides templates for animal records, and best practices and tips on disease management. It includes timed handouts that may be copied and distributed to students. However, because this course was developed for experienced livestock owners, the duration of learning exercises may differ for your program. Each topic is presented with a suggested methodology and teaching/learning materials.

- [*FAO Good Practices in Small-scale Poultry Production in East Africa*](#)

This comprehensive manual for improved poultry production was designed for trainers and producers in East Africa by the FAO's regional office. It covers topics ranging from health and disease management to recordkeeping and simple rules to ensure profitability.

- [*World Organization for Animal Health: Guide to Good Farming Practices For Animal Production Food Safety*](#)

This OIE and FAO document was developed to guide local authorities to help farmers ensure food safety during the keeping and processing of animals or animal products for sale. It covers hazards to farming systems and recommends good practices to combat them, including good farm management, animal health management, animal and health handling among other topics.

Farm Management Handbook of Kenya

[*Western Kenya*](#)

[*Central Kenya*](#)

[*East Kenya*](#)

This resource should serve primarily as a text for trainers. Though relevant, much of the content is technical because it was designed for researchers and extensionists. Topics include soil requirements, tables of subzones according to the growing periods for crops, run-off harvesting, the importance of fertilizing and nutrient recycling, possible crops and their varieties. It was developed by Kenya's Ministry of Agriculture in conjunction with German Technical Cooperation (GTZ). This resource is supplemented by CD-ROMs that have information and maps in a geographic information system (GIS).

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Assessment: Kenya

Assessment: Rwanda

Farm Management

[Managing Income-Generating Rural Activities: Village Group Training](#)

The FAO's widely utilized, illustrative, and learner-friendly guide is an ideal training resource that is available for free. It provides detailed explanations and examples of bookkeeping/record-keeping charts. It also features limited theoretical points, while making use of a progressive, participatory methodology. Each chapter begins with a review of the previous chapter and features a question-and-answer segment, followed by a summary and discussion.

[A Facilitator's Guide: FAO's Guide for Simple Bookkeeping and Business Management](#)

This 5-month training program is a follow-up to a guide for farmers who already have basic literacy and numeracy skills. This course tackles the fundamentals of bookkeeping in a user-friendly manner appropriate for small scale entrepreneurs. It also draws on previous work done in the Africa region to train more women in business management.

Information Systems and ICT Applications for Agriculture

OER Africa: Farmer's Agribusiness Training Manual

[Multimedia version](#); [Individual Module Outlines](#)

This student-centered, five-module curriculum equips farmers and farmer organizations with the skills they need to transform their operations into organized and efficient entrepreneurial ventures. This manual is distinguished by its focus on entrepreneurship and essential ICT skills for agriculture (module 4). The core features of the curriculum that will help trainers are the suggested time frame for lessons and tasks (these should be contextualized by including practical exercises and discussions relevant to the local environment), lesson outcomes, online and CD-based interactive supplementary resources, activities, a feedback guide, glossary, a conclusion to help gauge learning outcomes, and references.

[M-Farm](#)

Currently offered in Kenya, this SMS-based service was created to:

- Enable farmers to learn the current market prices of different crops from different regions or specific markets
- Aggregate farmer needs and orders and connect farmers with farm input suppliers
- Enable farmers to sell collectively and connect them with a ready market. Because many farmers do not have access to the Internet, M-Farm has adopted an SMS-based solution in which users send a simple text to a designated short code, depending on what they are looking for

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Assessment: Kenya

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Farm input suppliers, wholesalers and retailers, agricultural institutes, government bodies, media houses, and NGOs also have access to some M-Farm services and agricultural statistics.

[National Farmers Information Service \(NAFIS\)](#)

NAFIS is a voice and SMS service that offers agricultural extension information which farmers can access through mobile phones. NAFIS is updated through the Web, and the interactive voice response is created automatically through a text-to-speech engine in both Kiswahili and Kenyan English.

[OpenDataKit \(ODK\)](#)

Open Data Kit is a free and open-source set of tools that help organizations author, field, and manage mobile data collection solutions. ODK provides an out-of-the-box solution for users to:

- Build a data collection form or survey
- Collect the data on a mobile device and send it to a server
- Aggregate the collected data on a server and extract it in useful formats

[FrontlineSMS](#)

FrontlineSMS is a free and open source tool for small scale agricultural market information systems, data collection and reporting.

[Business Management Resources](#)

The British Columbia Ministry of Agriculture provides PDF and Excel templates that include detailed information on developing agricultural enterprise business plans. Topics and guides include Planning for Profit Enterprise Budgets and Excel Worksheets, Business Plan Guides, Labor Management & Human Resources, Business Structure, Succession & Estate Planning, and more.

[Sustainable Agriculture Research and Education: Building A Sustainable Business](#)

This site provides sample worksheets that illustrate how farm families set goals, researched processing alternatives, determined potential markets, and evaluated financing options. Blank worksheets help the reader develop a detailed, lender-ready business plan or map out strategies to take advantage of new opportunities.

WHAT TECHNOLOGY IS NEEDED?

The following resources are needed to conduct a production assistant training program:



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Assessment: Kenya

Assessment: Rwanda

- Computers (maximum 3 students per computer)
- Computer software (Microsoft Outlook applications, especially Excel spreadsheets and Access for database management and Quickbooks for bookkeeping)
- Projector
- Printer
- Mobile phones and/or other mobile devices
- Internet connection
- Training manuals
- Farm books (records)
- Accounting books
- A demonstration farm(s) or on-farm internships

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- Hands-on projects and assignments
- Peer dialogue, brainstorming, and problem-solving activities
- Interactive discussions and group projects (groups of 5–10 participants)
- Training in communication, relationship building techniques, group facilitation, managing expectations, critical thinking, and conflict resolution
- Reviewing case studies to sharpen analytical and decision making skills
- Activities that encourage learners to extend and adapt the ideas introduced in the course to their own environment
- Visits to demonstration farms
- Guest lecturers from successful cooperative farmers and managers

Production assistants will have ICT skills as well as the non-technical skills needed to manage and direct human resources, such as customer relations, communication, team management, and time management. As a result, they may have increased opportunities for advancement.

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

The following job/internship placement strategies have been tested and have shown good results:

- Invite potential employers to present their work to your students
- Integrate a career fair into your training program to bring employers into contact with your students, offering them good expo-

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Assessment: Kenya

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sure and the opportunity to meet potential employers and mentors

- Provide students with a 4-week farm internship, connecting students with local commercial farms, cooperatives, and extension services

ADDITIONAL RESOURCES

- [Soil Fertility Management in Dryland Agriculture Training](#)

Designed as a two-day training, this module covers the intricacies of soil management, including soil improvement methods.

- [Bookkeeping Course](#)

This is a comprehensive ACS distance education course. The topics listed should serve as a guide for the development of your curriculum. It may be used in tandem with the other resources provided.

- [World Agroforestry's Data Management Guide](#)

This resource consists of lecture notes, practice exercises, and a summary of key points for each module. It details how to design a spreadsheet for data management, how to organize and develop a data management strategy, as well as how to query a database for specific information. These skills will be crucial for production assistants or managers who are interested in accessing, managing, and using market and other data.

- Relevant ICT Case Studies

[Farm Radio](#)

[Voice-based services](#), two-way interactive services and SMS platforms

[Esoko](#)

[Mkilimo](#)

- Composting in the Tropics I-English version (PDF)

- [Better Manure, Better Crop](#) — English only

See natural pest management resources for organic agriculture.

- [Purdue Extension Portal](#)

This portal covers a range of agricultural topics. The organic agriculture section covers the basics of tillage in organic farming systems, soil and fertility management, weed management, plant and disease management, and other pertinent topics.

- Citizens Network for Foreign Affairs' (CNFA) Agro-dealer Model Training Course

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Assessment: Kenya

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This is a six-module training program on working capital. The relevant modules are business management skills, and managing business relations.

- Kenyan Office: fchabari@cnfakenya.org
- Regional Africa Office: mgummo@cnfa.org

URLs

- A Facilitator's Guide: FAO's Guide for Simple Bookkeeping and Business Management: <http://www.fao.org/sd/erp/toolkit/BinaryDownloaderServlet.pdf>
- Better Manure, Better Crop: http://www.gardenorganic.org.uk/pdfs/international_programme/BetterManureBetterCrops.pdf
- Bookkeeping Course: <http://www.acseduonline.com/courses/product.aspx?id=285>
- Business Management Resources: www.agf.gov.bc.ca/busmgmt/
- Composting in the Tropics I: http://www.gardenorganic.org.uk/pdfs/international_programme/Compost202.pdf
- Esoko: <http://www.esoko.com/about/>
- FAO Good Practices in Small-scale Poultry Production in East Africa: http://www.fao-ectad-nairobi.org/IMG/pdf/Poultry_Manual_for_Trainers_and_Producers.pdf
- FAO Training Guide in Animal Husbandry: <http://www.penhanetwork.org/attachments/PENHA%20TRAINING%20GUIDE%20IN%20ANIMAL%20HUSBANDRY%20FOR%20FAO%20UGANDA%20no.pdf>
- Farm Management Handbook of Kenya
Western Kenya: <http://www2.gtz.de/dokumente/bib/07-1282.pdf>
Central Kenya: <http://www2.gtz.de/dokumente/bib/07-1284.pdf>
East Kenya: <http://www2.gtz.de/dokumente/bib/07-1286.pdf>
- Farm Radio: <http://www.farmradio.org/>
- FrontlineSMS: www.frontlinesms.com/
- International Federation of Organic Agriculture Movements Training Material for Organic Agriculture: www.ifoam.org/growing_organic/7_training/t_materials/training_materials_main_page.html
- M-Farm: <http://mfarm.co.ke/>
- Managing Income-Generating Rural Activities: Village Group Training: http://www.fao.org/docrep/t1675e/t1675e06.htm#P365_25052
- Mkilimo: <http://gsmworld.com/documents/m-kilimo-case-study-v3.pdf>
- National Farmers Information Service (NAFIS): www.nafis.go.ke/
- OER Africa: Farmer's Agribusiness Training Manual

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Multimedia version: <http://www.oerafrica.org/FTPFolder/Agshare/Agribusiness/index.html>

Individual Module Outlines: <http://www.oerafrica.org/agricultureoer/AgricultureResources/tabid/1485/Default.aspx>

- OpenDataKit (ODK): <http://opendatakit.org>
- Purdue Extension Portal: www.extension.org/pages/18674/introduction-to-organic-agriculture
- Soil Fertility Management in Dryland Agriculture Training: http://www.wassan.org/training_modules/Latest_Modules/Soil%20Fertility%20Management%20Training%20Module.pdf
- Sustainable Agriculture Research and Education: Building A Sustainable Business: www.sare.org/Learning-Center/Books/Building-a-Sustainable-Business
- The Backpack Farm (BPF) Agriculture Program—Kuza 2011 Training Manual: <http://backpackfarm.com/site/1075kris/BP-FKuzaTraining2011.pdf>
- The International Livestock Centre for Africa Forage Seed Production Training Manual: www.fao.org/sd/erp/toolkit/BOOKS/forage_seed_production.pdf
- Voice-based services: <http://www.kissankerala.net/mobile/index.jsp#mobile>
- World Agroforestry's Data Management Guide: <http://www.worldagroforestrycentre.org/publications/publicationsdetails?node=45890>
- World Organization for Animal Health: Guide to Good Farming Practices For Animal Production Food Safety: http://www.oie.int/fileadmin/Home/eng/Food_Safety/docs/pdf/GGFP.pdf

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OPPORTUNITIES IN HEALTH

Information and communications technologies (ICT) have the potential to permeate almost every aspect of the health sector, strengthening the ability to monitor and respond to public health threats and improving the efficiency of administrative systems in health care facilities. There is a demand in the health sector for professionals skilled in ICT. Below you will find four such opportunities.

- **Data Entry Clerks and Patient Registration Clerks** ensure the timely entry and documentation of clinical data. They also register new patients, generate patient ID cards, and review charts to ensure all information is recorded properly.
- **Health Data Managers** organize and manage health information data by ensuring its quality, accuracy, accessibility, and security. Data managers also oversee the work of data entry clerks at hospitals and district health centers.
- **Hygiene and Sanitation Workers** provide cleaning services for local health facilities, offices, and restaurants. They also provide waste management services, such as recycling non-biodegradable materials.
- **Multimedia Specialists** use digital imaging, animation, audio, and video to produce, display, or disseminate content related to health.

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WHAT DO DATA ENTRY/PATIENT REGISTRATION CLERKS DO?

Data entry/patient registration clerks ensure timely entry and documentation of clinical data. Among other tasks, they complete registration forms, generate patient ID cards, register new patients, review charts to ensure all information is recorded properly, and provide general clerical support.

WHAT IS THE EMPLOYMENT OUTLOOK FOR DATA ENTRY/PATIENT REGISTRATION CLERKS?

As many African countries move towards e-health practices, there is a growing need for professionals in the health sector with basic ICT skills. Employers are seeking qualified employees to fill entry-level positions as patient registration and data entry clerks at community health clinics, district level hospitals, and health-focused nongovernmental organizations and private companies. [Partners in Health](#) suggest that one data clerk is needed for every 300–400 patient records.

The Ministries of Health in Kenya and Rwanda are currently using OpenMRS as its electronic health records (EHR) system. Employment opportunities as data entry and patient registration clerks exist with facilities run by the Ministry of Health as well as private health clinics (See [Ministry of Health–Republic of Rwanda](#) Specifically, in Rwanda, the Center for Treatment and Research on AIDS, Malaria, Tuberculosis and Other Epidemics–TRAC Plus, is actively recruiting data entry clerks as Rwanda rolls out its EHR system initiative.

The Ministry of Health in Rwanda plans to hire a total of 400 data entry clerks in the coming years; 60 have already been hired to work in health centers as the Ministry increasingly implements Electronic Health Records Systems using the Open MRS software.

Source: Partners in Health, Rwanda

WHAT IS THE BIG PICTURE?

Recommended training location	Urban setting
Target beneficiaries	Out-of-school youth aged 18–35
Average length of course	2-3 weeks
Maximum class size	20, with no more than two participants assigned to one computer
Other considerations	Training should be phased in order of difficulty, beginning with basic data entry, moving to revising data and advanced editing and finally to cohort building (see Partners In Health OpenMRS Model)

Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for employment.

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WHAT ARE THE TRAINING OUTCOMES?

The learning outcome of this course is the accurate and efficient entry of patient health data using OpenMRS instrument and forms. Upon successful completion of the course, graduates will have the competencies required to gain employment as a data entry clerk or patient registration clerk.

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- Secondary education (completed)
- Basic computer skills in Microsoft Office
- Basic Internet research skills
- Some clerical experience
- Ability to type 50 words per second

Recommended:

- Post-secondary studies, preferably in nursing, secretarial studies, or information systems
- English proficiency

Candidates can be tested to evaluate their existing skill set. For example, they can be asked to type a short paragraph, reproduce and format data on an Excel spreadsheet, and navigate the Web. Candidates who do not possess required skills can still be included in the training provided they have an opportunity to gain these skills during the training.

Youth who lack basic computer skills could be trained through a service provider for the European Computer Driving License [ECDL/ICDL](#). Microsoft's [Unlimited Potential](#) is another good source.

The education level required for employment in this position is lower than for other jobs profiled in this series, so this job presents viable employment options for a greater number of youth.

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- Professional experience in ICT, specifically data management, and data entry
- Familiarity with EHR systems and relevant software, such as OpenMRS.

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Assessment: Kenya

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Recommended skills include:

- Experience working in a classroom setting
- Experience teaching youth

Sources for identifying potential trainers experiences with Open MRS include Regional East African Centre of Health Informatics (REACH-Informatics) in Kenya, or Partners in Health in Rwanda.

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

A variety of training resources are available and should be selected based on how well they respond to industry demand and meet the needs of learners. The following training materials should be tailored to the needs of local employers, allowing students to acquire customized skills and contextualized knowledge of how their training will be applied in the marketplace.

- There are several free online resources aimed at equipping youth with the basic health knowledge required to gain employment as data entry clerks or patient registration clerks. To provide training participants with basic knowledge on Health Information Management Systems and why it is needed in hospitals, refer to the [Introduction to Electronic Medical Records](#) from Foss 4 Health. In addition, The Centers for Disease Control and Prevention offers a free online course on [Health Literacy](#) for public health workers. The tutorial is self-paced and provides an introduction to common medical and health terms.
- The modules on Data Entry in the [STEPS Survey training manual](#), section 6, pages 1–7 developed by the World Health Organization can be incorporated into a training program. Topics include the data entry process, rules and guidelines for data entry, how to handle queries, and data entry and management.
- The following lessons are borrowed from E-Health: Software Development and Implementation ([EHSDI](#)) training course developed by Partners in Health–Rwanda. The lessons listed below are designed to be instructor-led and are in the form of PowerPoint presentations:
 - Introduction to OpenMRS
 - Introduction to Medical Data
 - Data Entry and Forms
 - Medical Background to HIV and TB data collection
 - Health Statistics in Rwanda

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Assessment: Kenya

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- REACH-Informatics in Kenya offers short courses and practicum training to support the development, implementation, maintenance, evolution, and use of EHRs. REACH-Informatics provides an [overview of the electronic medical records system/Open MRS in Rwanda](#) that may be used as a valuable training resource.
- In addition, the training resource (Power Point Presentation) on [Data Quality Assurance](#) is also available

Open MRS software is open-source and the majority of the training materials identified here are available online for free. Arrangements should be made with employers to leverage resources in order to provide support to students.

WHAT TECHNOLOGY IS NEEDED?

The following resources are required to implement the data entry/patient registration clerk training program:

- Computers
- Connectivity to the Internet and/or a local area network (LAN)
- Printer
- Projector and screen
- [OpenMRS software](#)
- Web browser
- Microsoft Office

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- A curriculum adapted to the needs of the learners
- Hands-on projects and assignments
- Activities that encourage learners to extend and adapt the ideas introduced in the course to their own environment
- Peer dialogue, brainstorming, and problem-solving activities
- Ample time for students to practice their typing and data entry skills
- Field trips to health facilities would also be beneficial for training participants

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

Training providers may find it useful to:

- Develop close networks with the Ministry of Health and its implementing partners

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Assessment: Kenya

Assessment: Rwanda

- Acquire relevant market surveys and training needs from target employers and partner companies
- Conduct outreach to human resources departments
- Solicit feedback from private sector companies or other local employers every three to six months

ADDITIONAL RESOURCES

- Several free online tutorials are available for practicing keyboarding skills and data entry, available at www.nibblefingers.com and www.typingtest.com
- For more information on what patient data is generally collected and data collection protocols, see Partner's In Health [Electronic Medical Records model](#).
- [Open Data Kit's](#) 'Collect' is an open-sourced phone-based tool for mobile data collection. In replacement of paper forms it can be used to collect a variety of form data types: text, location, photos, video, audio, and barcodes. Data then could be sent to any Java server. USAID-AMPATH uses hundreds of phones with ODK for home-based HIV counseling and testing of millions of rural Kenyans and transmits the data to OpenMRS, a medical record system, for analysis and follow-up.

URLs

- CDC's Health Literacy: www.cdc.gov/healthliteracy/training/index.html
- Data Quality Assurance: <http://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbmxyZWVjaGluZm9ybWF0aWNzfGd4OjdmMzEyYjdlZmU1NjFIYQ>
- EHSDI Training Course: www.wiki.openmrs.org/display/RES/EHSDI+Training+Course
- European Computer Driving License: <http://www.ecdl.org/programmes/index.jsp?p=102&n=108&a=0>
- Introduction to Electronic Medical Records: http://foss-for-health.org/wiki/index.php?title=Introduction_to_EHR_Handout
- Microsoft's Unlimited Potential: <http://www.microsoft.com/About/CorporateCitizenship/en-us/>
- Ministry of Health–Republic of Rwanda: <http://www.moh.gov.rw/>
- Open Data Kit: www.opendatakit.org/about/tools.com
- OpenMRS software: www.openmrs.org
- Overview of the electronic medical records system/Open MRS in Rwanda: <http://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbmxyZWVjaGluZm9ybWF0aWNzfGd4OmY4YjAxNmYyYTM5ZGE5>
- Partners in Health: <http://www.pih.org>
- Partners In Health OpenMRS Model: http://model.pih.org/electronic_medical_records/personnel
- STEPS Survey training manual: www.who.int/chp/steps/Section%206%20Data%20Entry%20Guide.pdf

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WHAT DO HEALTH DATA MANAGERS DO?

Health data managers organize and manage health information by ensuring its quality, accuracy, accessibility, and security. Data managers also oversee the work of data entry clerks at hospitals and district health centers.

WHAT IS THE EMPLOYMENT OUTLOOK FOR HEALTH DATA MANAGERS?

There is an increasing demand for ICT-skilled professionals to support electronic health records (EHR) systems that are under development in many African countries. The Ministries of Health in Kenya and Rwanda are currently using OpenMRS as their EHR system. This has created a need for workers skilled in OpenMRS, including data managers, to implement and manage the national EHR system in these countries.

WHAT IS THE BIG PICTURE?

Recommended training location	Urban setting
Target beneficiaries	Youth ages 18–25
Average length of course	80–100 hours of classroom instruction
Maximum class size	30

The training program consists of two primary components. The first component is technical training on OpenMRS software. The second component, data management and managerial skills training, is particularly important because health data managers must verify the quality and accuracy of data input by a cadre of data entry clerks working under their supervision.

Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for employment.

WHAT ARE THE TRAINING OUTCOMES?

Upon successful completion of a training program, youth should have the skills necessary to gain employment as a health data manager.

These skills include:

- Competency in all applications of OpenMRS, including creating forms, running reports, and building COHORTS
- Basic knowledge on data management and EHRs
- Managerial skills required to manage data entry clerks

For youth who would like further training, [AMREF](#) in Nairobi offers several relevant accreditation courses, including Health Service Management and Organization (3 weeks) and Health Systems Research (4 weeks).

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WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- Literacy
- Rwanda: Secondary Education Advanced Level; Kenya: Certificate of Secondary Education
- English proficiency
- Excellent ICT skills

Recommended:

- Some vocational training in Information Management, Computer Sciences or Nursing
- At least one year of experience in data management, preferably in health information management systems
- Experience as a community health worker

Youth who lack computer skills could be trained through a service provider for the European Computer Driving License [ECDL/ICDL](#). Microsoft's [Unlimited Potential](#) is another good source.

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- Professional ICT experience
- Data management and data entry experience
- Familiarity with Electronic Health Records systems and relevant software, such as OpenMRS

Sources for identifying potential trainers include the Regional East African Centre of Health Informatics ([REACH-Informatics](#)) in Kenya, or [Partners in Health](#), Rwanda.

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

Several training resources have been tested at the local level and are available at minimal cost. When selecting a curriculum for training, implementing organizations should consider how well the material responds to industry demands and meets the needs of learners. The following training materials should be tailored to the needs of local employers, allowing students to acquire customized skills and contextualized knowledge of how their training will be applied in the marketplace.

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Electronic Medical Records and OpenMRS

- The [OpenMRS training manual](#) developed by FOSS-for-Health includes material on eighteen topics, including background on the OpenMRS software, an introduction to EHRs and health Information management systems, and instruction on how to use the software, including creating patient forms, running data reports, COHORT building, and backing up data and restoring. These materials can be printed and used as handouts. Topics range in complexity and may take 3–4 hours, depending on the learning styles of participants and availability of facilitators.
- E-Health: Software Development and Implementation (EHSDI) is a training course developed by Partners in Health and is implemented in partnership with the Kigali Institute for Science and Technology. Although the course targets local software developers, several of the [lessons](#) may be incorporated into a training program for data managers. The lessons are designed to be instructor-led and are in the form of PowerPoint presentations. Lessons include:
 - Introduction to OpenMRS
 - Introduction to Medical Data
 - Network and IT infrastructure for OpenMRS
 - OpenMRS Data Synchronization
 - Network Administration-Building and Maintaining Networks
 - Website Security
 - Reporting-Cohort Builder, Reporting Framework
- Relevant training materials from the Data Management course offered by REACH-Informatics are accessible online and can be used in a training program. These training materials provide participants with a basic understanding of [data management](#), including [data quality control fundamentals](#), [data profiling](#) as well as an overview of the use of [OpenMRS in Rwanda](#). It is recommended that instructors lead the first three lessons individually in a 3–4 hour training sessions. It would be highly valuable to complement these lessons with hand-on experience with OpenMRS software.
- [The Informal Sector Business Institute](#) (ISBI) located in Nairobi provides relevant training as a part of its salesmanship training course. This course is designed to be delivered in 200 hours over a period of 33 days. The course covers the following topics: how to manage people, managerial roles, personal effectiveness, delegation, effective leadership, and teamwork. Adding these lessons on personnel management to the training resources mentioned above would be highly beneficial for youth seeking employment as health data managers who will be tasked with overseeing data entry clerks. Training on management skills should be flexible and tailored to the needs of the student and potential employers. Training providers are encouraged to engage with other training institutes who are offering similar courses in its local area.

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Successfully implementing a training program using the resources identified above requires that organizations have a qualified trainer skilled in the use of OpenMRS software and experienced in health informatics and/or EHR. If your organization is not equipped to facilitate these training resources, youth may be directed towards the following at-cost training opportunities:

- [REACH-Informatics](#) in Kenya provides the Data Management course referenced above for a fee of US\$285 for 5 days of training. In addition, REACH-Informatics offers a 3-day workshop on using OpenMRS. The workshop targets interested EHR implementers within the health informatics field. The registration fee for the workshop is US\$100. The following topics are covered:
 - Introduction to medical informatics and open source medical records systems
 - Installation of OpenMRS
 - System maintenance and upgrade
 - Data collection forms design and usage
 - Reporting (cohorts, reporting module and SQL)

WHAT TECHNOLOGY IS NEEDED?

The following resources are needed to conduct a health data manage training program:

- Computer
- Microsoft Office 2003 or later
- Projector
- Screen or a blank wall

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

- Hands-on projects and assignments
- Activities that encourage learners to extend and adapt the ideas introduced in the course to their own environment
- Peer dialogue, brainstorming, and problem-solving activities
- Field trips to local health facilities
- Guest lectures from health service workers, representatives from the Ministry of Health, and health informatics professionals

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HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

Training providers may find it useful to:

- Allocate resources to set up placement offices with dedicated staff to work with companies and find internship or job opportunities for youth
- Develop systems to place and track students as they undertake internships
- Solicit regular feedback from employers
- Analyzing market data to identify employers, engage them in the program, and build relationships with these companies
- Conduct outreach to human resources departments to ensure training meets the current needs of local employers
- Solicit feedback from private sector companies or other local employers every three to six months

Employment opportunities as health data managers exist within health facilities or private health clinics operated by the Ministry of Health. In Rwanda, the Center for Treatment and Research on AIDS, Malaria, Tuberculosis and Other Epidemics-TRAC Plus is actively recruiting health data managers as the government rolls out its EHR system initiative (<http://www.tracrwanda.org.rw>).

ADDITIONAL RESOURCES

- Open Data Kit's Collect is an open-sourced, phone-based tool for mobile data collection. It can be used to collect a variety of form data types: text, location, photos, video, audio, and barcodes. Data then could be sent to any Java server. USAID-AMPATH uses hundreds of phones with ODK Collect for home-based HIV counseling and testing of millions of rural Kenyans. Data are transmitted to OpenMRS, a medical record system, for analysis and follow-up. www.opendatakit.org/about/tools.com

URLs

- AMREF: <http://www.amref.org/where-we-work/our-work-in-kenya/>
- ECDL/ICDL: <http://www.ecdl.org/programmes/index.jsp?p=102&n=108&a=0>
- EHSDI lessons: <https://wiki.openmrs.org/display/RES/EHSDI+Training+Course>
- ISBI: <http://eitkenya.org>
- Microsoft's Unlimited Potential: <http://www.microsoft.com/About/CorporateCitizenship/en-us/>
- OpenMRS training manual: http://foss-for-health.org/wiki/index.php?title=OpenMRS_Manual_for_Linux
- Partners in Health, Rwanda: <http://www.pih.org/pages/rwanda-contact>
- REACH Informatics: <http://reach.ampath.or.ke/>
- REACH-Informatics Data Management course materials:
 - Data management: <http://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxyZWJjaGluZm9ybWF0aWNzGd4OjM2MGEwNGVhNmE0ZjQxNzk&pli=1>

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- Data quality control fundamentals: <http://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxyZWVjaGluZm9ybWF0aWNzfGd4OjI0MzdkYjY4OGQ4Y2ZlMDU>
- Data profiling: <http://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxyZWVjaGluZm9ybWF0aWNzfGd4OjRjYTZiNzM0YTE2MTlhOWM>
- OpenMRS in Rwanda: <http://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxyZWVjaGluZm9ybWF0aWNzfGd4OmY4YjAxNmYyYTMSZGE5>

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WHAT DO HYGIENE AND SANITATION WORKERS DO?

Hygiene and sanitation entrepreneurs provide cleaning services for local health facilities, offices, and restaurants, as well as waste management services, such as recycling non-biodegradable materials.

WHAT IS THE EMPLOYMENT OUTLOOK FOR HYGIENE AND SANITATION WORKERS?

There is a growing demand in urban areas for providers of hygiene, sanitation, and cleaning services. Employment opportunities include self-employment—youth can establish small businesses or cooperatives that provide recycling or cleaning services—or formal employment in existing hygiene or sanitation businesses.

Green Africa has a plastic recycling enterprise in Nairobi that collects and recycles plastic, which is manufactured into plastic posts that are sold and used for building infrastructure. The founder started collecting plastic, now he runs his own business with ten employees. Hear the business owner's story in this [online video](#).

Community Cleaning Services in Nairobi trains young people to be sanitation service providers, including entrepreneurs who start their own businesses and employ professional cleaners. These mobile cleaning teams service shared public spaces, such as schools, health clinics, and restaurants.

WHAT IS THE BIG PICTURE?

Recommended training location	Urban areas
Target beneficiaries	Youth ages 18–25 with limited education
Average length of course	Varies considerably (see below)
Maximum class size	30
Other considerations	Training prepares entrepreneurs and other youth to secure employment in the recycling and solid waste disposal or cleaning services industries. Organizations developing training in this area should evaluate the local market to assess how best to design a training program that can successfully employ disadvantaged or at-risk youth.

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Entrepreneurship training should comprise two major components:

- Practical skill development (recycling, cleaning, etc.), and
- Business skills (financial management, sales & marketing, leadership)

Training should include classroom and field work to prepare participants to provide quality services, to manage their own business, and to generate demand in their communities for these services.

Youth who seek formal employment in this sector may receive training focused solely on practical skills.

Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for employment.

WHAT ARE THE TRAINING OUTCOMES?

Participants will learn about the environment and the technical aspects of waste handling and management. Upon completion of the course, students are expected to know how to:

- Master proper recycling and cleaning techniques
- Prepare a simple and practical business plan
- Maintain simple accounting records
- Manage one's business
- Communicate effectively
- Apply ethics and best practices

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- None

Youth interested in starting a small business should have:

- Literacy and numeracy skills at the secondary level
- Business skills
- Basic computer skills, especially in using spreadsheets for basic accounting and tracking. If youth lack these skills, it is recommended that youth obtain training through a service provider such as the European Computer Driving License ([ECDL/ICDL](#)) or Microsoft's [Unlimited Potential](#).

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Recommended:

- Secondary education (preferred by employers)
- Communication, organization, teamwork, and management skills

The minimal education and specialized skills required for employment in this industry make it a viable option for disadvantaged youth who have had limited access to education.

There are some considerations that should be taken into account when deciding to enter this type of profession, such as the health risks associated with collecting recyclables in unsanitary environments. In addition, business development opportunities may require youth to have access to transport in order to bring collectables to recycling centers or provide cleaning services to multiple clients, which may pose a challenge to some youth.

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- A degree from a university business school
- Familiarity with local conditions for youth start-up businesses
- Experience developing business plans
- Experience teaching entrepreneurship
- Experience interacting with youth and working in the classroom

Recommended skills include:

- Instructional skills such as classroom management, strategies for engaging learners, and methods for facilitating group learning
- Knowledge of recycling and solid waste management; if trainer does not have this knowledge, a professional in this field should be contracted in addition to the trainer

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

A variety of training resources are available and should be selected based on how well they respond to industry demand and meet the needs of learners. The following training materials should be tailored to the needs of youth and communities in the local context.

- **Start Your Waste Recycling Business Manual.** This training resource, developed by the International Labour Organization, provides a technical step-by-step guide to starting a community-based recycling business, designed for unskilled laborers. A corresponding trainer's guide is also available. The manual consists of three handbooks: a Business Manual; a Business Plan

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Structural Guide; and Technical Handouts. This course is designed to be facilitated for six hours a day over a period of five days and includes a half-day field visit to a local recycling plant. Although, in some cases, an extra one to two days may be necessary to ensure participants have mastered the content. It is recommended that the content be delivered through brief lectures mixed with discussions and group work.

- **Community Cleaning Services:** This training resource, developed and offered in Nairobi, is a 32-hour course on how to start a cleaning service business. Training participants are encouraged to form mobile cleaning teams, in which one youth takes on the leader role as the business owner. The training manual includes a total of sixteen modules covering topics such as money management, business start-up, record keeping and data management, team leadership, marketing and sales. For access to this curriculum, contact Community Cleaning Services directly via joseph.njenga@comcsewrrvice.com. Although, these modules are designed to be delivered in the classroom, the majority of the training is conducted in the field, and participants are placed with mentors to facilitate skills development.
- [*MicroEnterprise Fundamentals for Manufacturing and Service Businesses™*](#): This curriculum was developed by Making Cents and is available for a fee. This course teaches participants basic and practical business concepts such as effective planning and recordkeeping, income allocation and financial planning, marketing as well as savings and credits. The curriculum can be taught in 30–40 hours.

Subsequent training material may be referenced or adapted for use in the training program based on the participant's level of knowledge in the subject area.
- **Solid Waste Management Toolkit:** Developed by the United Nations Environment program, this toolkit examines the use of environmentally sound technologies for managing solid wastes in developing countries. It is designed as a sourcebook on solid waste management, covering topics such as the principles of solid waste management, processing and treatment, and final disposal. Part II of the toolkit provides information on materials recovery and recycling as well as on processing recyclables. It also offers regional overviews on solid waste management, including Africa.
- **Guidelines to recycling solid wastes:** Developed by the South African Ministry of Environment and Tourism, these guidelines focus on the recycling component of an integrated waste management system, with emphasis on solid waste. The following lessons would be particularly useful to incorporate into a training program: recycling scheme options, finding a market, how to negotiate a contract to set up a depot, and recycling laws.
- [*Sustainable Sanitation and Water Management*](#) offers online tutorials on the following sanitation topics: surface disposal of solids and liquids.

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- [The Informal Sector Business Institute](#) in Nairobi offers a salesmanship training course that covers the following topics: managing people, managerial roles, personal effectiveness, delegation, effective leadership, and team work. The course is designed to be delivered in 200 hours over 33 days. Adding these lessons on personnel management to the training resources mentioned above would be highly beneficial for youth starting their own businesses and managing employees. Management skills training should be flexible and tailored to the needs of the student and potential employers. Training providers are encouraged to engage with other local training institutes that offer courses similar to those above.

WHAT TECHNOLOGY IS NEEDED?

The following resources are needed to conduct a training program that includes computer-based modules:

- Computer
- Accounting software
- Projector and screen
- Printer
- Internet connection
- Training Manuals

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

Optimal instruction includes:

- Interactive, discussion-based lessons that encourage young people to think like business people
- Active engagement by students
- Support of students through the learning process
- Activities that encourage learners to extend and adapt the ideas introduced in the course to their own environment
- Peer dialogue, brainstorming, and problem-solving activities

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

Training providers may find it useful to:

- Link graduates to financial institutions for business loans and other sources of start-up capital. In Kenya, the government's [Youth Enterprise Development Fund](#) provides loans to existing financial intermediaries such as microfinance institutions and microfinance focused NGOs for lending to youth enterprises.
- Collaborate with business and trade associations, chambers of commerce, and relevant government entities to support young entrepreneurs and to ensure that the tools and practices listed in the curriculum portion of this guide are relevant to local conditions.

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- Recruit adult mentors from relevant local businesses to coach young entrepreneurs in their efforts to develop small enterprises.

ADDITIONAL RESOURCES

[Community-Based Waste Management](#) for Environmental Management and Income Generation in Low-Income Areas: A Case Study of Nairobi, Kenya.

[Reclaiming Reusable and recyclables](#) in Africa. A critical review of literature provides valuable information, includes wages, etc. [Waste Portal](#) is a Website in which organizations and consultants active in waste management work together to collect information on urban waste management with an emphasis on low- and middle-income countries.

URLs

- Community-Based Waste Management: <http://www.cityfarmer.org/NairobiCompost.html>
- European Computer Driving License: <http://www.ecdl.org/programmes/index.jsp?p=102&n=108&a=0>
- Green Africa's online video: <http://www.maximizingprogress.org/2009/05/green-african-plastics-recycler-evans.html>
- Guidelines to recycling solid wastes: <http://www.sawic.org.za/documents/232.pdf>
- MicroEnterprise Fundamentals for Manufacturing and Service Businesses: www.makingcents.com/products_services/curriculum.php
- Informal Sector Business Institute: www.eitkenya.org
- Microsoft's Unlimited Potential: <http://www.microsoft.com/About/CorporateCitizenship/en-us/>
- Reclaiming Reusable and recyclables in Africa: http://www.inclusivecities.org/research/RR6_Samson.PDF
- Solid Waste Management Toolkit: www.unep.or.jp/ietc/Publications/spc/Solid_Waste_Management/index.asp
- Start Your Waste Recycling Business Manual: http://www.ilo.org/public/english/employment/recon/eiip/download/waste_recycle/business_manual.pdf
- Sustainable Sanitation and Water Management: www.sswm.info/category/implementation-tools/implementation-tools-introduction
- Waste Portal: <http://wasteportal.net/>
- Youth Enterprise Development Fund: <http://www.youthfund.go.ke/>

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WHAT DO MULTIMEDIA SPECIALISTS FOR THE HEALTH SECTOR DO?

Multimedia specialists use digital imaging, animation, audio, and video to produce, display, or share content related to health. As the field of multimedia production in the health sector continues to grow, opportunities increase for youth to run their own independent media outlets or to work for others as multimedia assistants, designers, or other specialists.

WHAT IS THE EMPLOYMENT OUTLOOK FOR MULTIMEDIA SPECIALISTS IN THE HEALTH SECTOR?

As Africa looks for effective ways to communicate with its large youth population, multimedia is becoming a powerful vehicle with which to disseminate targeted health messages concerning HIV/AIDS, family planning, and maternal health. Employers are seeking qualified youth who possess multimedia skills and know how to communicate with other youth as peer educators to fill entry-level positions.

WHAT IS THE BIG PICTURE?

Recommended training location	Urban settings
Target beneficiaries	Youth ages 17–24 (JHPIEGO training); people 21–35 (SMC-PAU training)
Average length of course	Varies considerably, see below
Maximum class size	30
Other considerations	It may be necessary to adapt these courses to meet the needs of learners in their local context and ensure that they meet industry requirements.

These courses teach participants how to produce multimedia materials related to health and other areas. It is recommended that, following this training, students acquire specialized training in specific areas of interest.

Because these training programs focus heavily on multimedia production, youth entering the health sector should also obtain relevant health training in order to have the sectoral knowledge required by employers. (Links to health-related, open educational resources are provided below.)

Training in English language, life skills, and job-seeking strategies is also recommended to increase opportunities for employment.

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WHAT ARE THE TRAINING OUTCOMES?

Upon completion of the course, students will have

- Knowledge about and skills in multimedia production and the use of technology to support multimedia production for health messaging
- Improved life skills, workplace attitudes, and interpersonal and communications skills
- Earned certification in Creative and New Media, awarded by the Pan-African University

Students are encouraged to take external examinations and/or government trade exams for accreditation

WHAT ARE STUDENT PREREQUISITES FOR TRAINING?

Required:

- Basic literacy skills
- Basic numeracy skills
- Basic computer skills
- Completion of lower secondary education
- Ability to read and write English

HOW DO WE SELECT INSTRUCTORS?

Look for individuals who have:

- Theoretical as well as practical knowledge
- Excellent instructional, mentoring, and facilitation skills
- Experience delivering multimedia training and/or working in the health sector
- Connections with the local media and health sectors in order to help facilitate internship and job placements

WHAT ARE THE CURRICULUM REQUIREMENTS AND RESOURCES NEEDED?

When selecting a curriculum for training, implementing organizations should consider how well the material responds to industry demand and meets the needs of learners. Training materials should be tailored to address to the needs of local employers, allowing students to acquire customized skills and contextualized knowledge of how their training will be applied in the local context.

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- [SMC-PAU Media Skills Training](#)

This course has four components:

1. Life skills (70 instructional hours delivered over a 2-week period), covering creative thinking, innovation, effective communication, as well as presentation and organizational skills
2. Entrepreneurship skills (70 instructional hours delivered over a 2-week period)
3. Media-related skills training (168 instructional hours delivered over a 5-week period) over 5 weeks: digital imaging, audio/video composition, and web design/development (see table)
4. Project-based learning (7–8 weeks upon completion of the three aforementioned modules)

SMC-PAU Media-related skills training

Digital Imaging for Print and Graphics Design	Audio/Video Composition and Editing	Web Design and Development
<ul style="list-style-type: none"> • Intro to graphic design • Intro to page design • Use of color in design • Logo design concept • Using images in publications • Introduction to Adobe Photoshop • Magazine publication design 	<ul style="list-style-type: none"> • The industry workflow • Post-production workflow • Introduction to non-linear editing • Principles for capturing • Working with video and audio layers • Working with transitions • Editing motion controls • Editing commercials and documentaries 	<ul style="list-style-type: none"> • Web design & development • Intro to Web design using Adobe Dreamweaver • Building, planning and publishing a Web site • Understanding and working with CSS • Intro to JavaScript • Enhancing the user experience with rich media and video • Intro to dynamic Web sites

- [JHPIEGO Multimedia for Learning Workshop](#)

This 5-day course consists of two primary components:

1. Developing high quality multimedia learning materials, including photographs, audio, and video
2. Integrating multimedia content into their courses and curricula

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- [Adobe Youth Voices Essentials](#)

Program curricula focus on media making in general and illustrate the “how to” of youth-centered instruction. Youth work with adult facilitators, who guide them in using media tools to effectively communicate their ideas. An overview of sample curricula for video production and animation is provided below and all curricula are available at no charge.

Topics	Description	Duration
Video Production	Music Videos: participants use Adobe Premiere Pro or Elements or Adobe Audition to create music videos	12–13 weeks/ 8 sessions
	Documentaries: Participants will use Adobe Premiere Pro or Elements to create a short documentary	12–13 weeks/ 8 sessions
Animation	Participants use Adobe Flash, Adobe Photoshop Elements, or other software to create a one to three-minute Flash animations	12–13 weeks/ 8 sessions

- [Roots and Shoots](#)

This program provides training on photography and video production to equip youth with ICT skills. Delivered in Tanzania and other parts of Africa, it targets both in-school (secondary school students) and out-of-school youth (secondary school leavers) from both urban and rural areas. Delivered over a two-week period for a total of 50 instructional hours, the training covers key lessons such as introduction to the digital world, camera work, still pictures, and script writing and editing. Lessons are in English. Each class has two trainers (one master trainer and one providing hands-on support in the lab) who support approximately 30 students (2 per computer). Participants receive a certificate upon completion.

WHAT TECHNOLOGY IS NEEDED?

The courses above may require the following resources:

- Laptop
- Internet connectivity
- Digital camera capable of taking stills and shooting video
- Portable digital audio recorder
- Headset with microphone
- Video and photo cameras and camera accessories

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- Microsoft Office
- Adobe Creative Suite
- Adobe Elements
- Image editing software (e.g., Gimp, Photoshop)
- Audio editing software (e.g., Audacity, Soundbooth)
- Video editing software (e.g., Windows Movie Maker, Premiere)

WHAT TEACHING METHODS WORK BEST FOR THIS COURSE?

- Interactive, student-centered activities
- Practical, hands-on projects and assignments
- Student consultancies or internships
- Group projects

HOW DO WE HELP YOUTH TRANSITION FROM TRAINING TO WORK?

Training providers may find it useful to:

- Arrange internships in which graduates can apply newly acquired skills in a real work environment
- Actively engaging employers early in the design process by asking employers to review curricula to ensure it covers relevant skills and meets industry requirements
- Pair students with mentors who are leading practitioners in specific fields

ADDITIONAL RESOURCES

- “[Modules for Training Telecenter Staffs](#),” by R.D. Colle and R. Roman (Cornell University)
- “Field Guide: A Practitioners Tool to Developing Mobile Behavior Change Communication (mBCC) Programs,” by Abt Associates, Johns Hopkins University, and FHI 360 (under development).
- African Health OER Network features [a range of open educational resources for health education](#)
- [Commonwealth of Learning Web](#) site houses various health curricula, including integrated HIV/AIDS prevention, child health, malaria, and counseling for caregivers
- [Basic Guide to Open Educational Resources](#)
- “[Digital Literacy and Citizenship Curriculum](#),” offered for free by Common Sense Media

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URLs

- Adobe Youth Voices Essentials: <http://essentials.youthvoices.adobe.com/curriculum.aspx>
- JHPIEGO Multimedia for Learning Workshop: <http://www.jhpiego.org/>
- Roots and Shoots: <http://www.pearsonfoundation.org/janegoodall/index.html>
- Shujazz FM: <http://brendanbannon.com/wp/?p=301>
- SMC-PAU Media Skills Training: <http://www.smc.edu.ng/>
- Voices of Africa Media Foundation: <http://www.voicesofafricamediafoundation.org/>; <http://mobilemediatoolkit.org/case-studies>

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SKILLS INTEGRATION EXERCISES

Jobs in the agriculture, health and ICT sectors increasingly require entry level employees to have basic ICT, life and entrepreneurship skills as well as specialized technical skills. These core foundational skills, however, are most effective when they are connected to technical skills and youth understand how to apply them on the job. As a result, youth need integrated employability training programs in which they can learn how these skills work together to increase productivity and overall job performance.

Thus, the sample exercises included in this section are designed to create linkages between foundational and technical skills, and demonstrate how this integration can occur in the opportunities profiled in this toolkit. For example, the exercise on inventory control allows students to practice using Excel to track, manage, and control inventory in an agricultural cooperative, business or store.

Organizations can also use these exercises as examples to help them create similar lessons that will help trainers contextualize the foundational skills to specific jobs and help students apply these skills and concepts to target jobs or business opportunities.

These exercises include:

- Integrating ICT Skills
- Integrating Life Skills
- Integrating Entrepreneurship Skills

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EXERCISES FOR INTEGRATING ICT SKILLS

The following exercises allow students to practice using basic ICT productivity tools, including Excel, Word, and PowerPoint, and apply these skills to jobs that require employees to manage inventory, enter data electronically, and create multimedia designs.

The exercises build on concepts introduced in widely used ICT skills training curricula, including Microsoft's Unlimited Potential, International Computing Driver's License (ICDL), and Cisco IT Essentials. The exercises link to specific lessons in these curricula, providing opportunities for the facilitator to contextualize the lesson to the specific job or industry that the students are targeting for their employment.

- Spreadsheets for Inventory Control (Agriculture Sector) See accompanying file: *ICT Exercise 1* or [click to download](#)
- PowerPoint for Mobile Apps Development (ICT sector)
 - Instructions See accompanying file: *ICT Exercise 2a* or [click to download](#)
 - PowerPoint See accompanying file: *ICT Exercise 2b* or [click to download](#)
- Word Processing for Data Entry (Health Sector)
 - Instructions See accompanying file: *ICT Exercise 3a* or [click to download](#)
 - Spreadsheet See accompanying file: *ICT Exercise 3b* or [click to download](#)
- Word Processing for Multimedia Production (ICT sector) See accompanying file: *ICT Exercise 4* or [click to download](#)

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EXERCISES FOR INTEGRATING LIFE SKILLS

The following exercise allows students to practice effective communication and customer care techniques and apply these skills to jobs such as a call center agent in a business process outsourcing company or other customer care positions. The exercise builds on concepts introduced in various life skills curricula and provides opportunities for trainers to contextualize these skills to the specific job that the students are targeting for employment.

- Communications and Customer Care for Call Centers (ICT Sector)
See accompanying file: Life Skills Exercise 1 or [click to download](#)

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EXERCISES FOR INTEGRATING ENTREPRENEURSHIP SKILLS

The following exercise allows students to practice using Microsoft Word and Microsoft Publisher to create marketing materials for a small business. The exercise builds on ICT and entrepreneurship skills curricula and provides opportunities for students interested in launching, sustaining and growing a micro- or small-scale business to strengthen their ability to sell a product or service.

- Generating Sales and Marketing Materials for Small Businesses
See accompanying file: [Entrepreneurship Exercise 1](#) or [click to download](#)

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Youth Employability in Information & Communications Technology, Agriculture & Health: Kenya Assessment Summary

CONTEXT

The youth and labor market assessments in Kenya, conducted from March–May 2011, aimed to document labor market demands and youth interest in work in the ICT, agriculture, and health sectors. The study was conducted in three locations (2 urban, 1 rural), including Nairobi City, Kisumu City, and Ndiru in the Kagan West Location of Homa Bay County. The youth survey was conducted with 101 youth, 85 percent of whom were aged 18–24. Surveyed youth fell along a 50/50 gender split and were also evenly divided by urban and rural residency.

The employer surveys were conducted with 22 employers, 19 of whom were based in Nairobi and the remaining 3 in Kisumu. Of the employers surveyed, the majority were in the ICT sector (42 percent), followed by the health (31 percent) and agriculture (26 percent) sectors, respectively.

In addition, a stakeholder consultation was conducted in the three sectors. These consultations aimed at identifying relevant stakeholders, resources that could supplement youth project resources, crops that offer opportunities for youth in agriculture, entrepreneurship and employment opportunities and the type of technical and life skills needed by the youth to enter these sectors.

LABOR MARKET ASSESSMENT

At present, 20 percent of Kenya's labor force is employed in the formal economic sector, while the remaining 80 percent is employed in the informal sector. The overall unemployment rate stands at 40 percent (2008), but rises to 50 percent for women and out-of-school youth. Statistics such as these help account for the fact that 50 percent of Kenya's population (41,070,934) lives below the poverty line.

The primary causes of unemployment and underemployment in Kenya include slow or declining economic growth, the high costs of labor in specialized fields, a wide skills mismatch between labor force capacity and employment demand, poor dissemination of labor market information, and rapid population growth.

Growth sectors within ICT

In the ICT sector and related fields, employers identified a number of growth areas with employment and entrepreneurial opportunities for youth. These included:

- Business Process Outsourcing (BPO)
- Development of mobile telephone applications

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- Telecommunications
- Internet Web site design
- Network administration
- E-procurement
- Mobile based agricultural support and market research

Potential employers

Most of the firms surveyed during the assessment (72 percent) indicated that they were growing and would look to expand their employee base during the next 12 to 24 months. While the prevailing status of the global economy may threaten the growth, surveyed respondents expressed a cautious optimism. Among the companies and institutions that reported increasing employment opportunities for youth were the following:

- Mobile phone companies
- BPO companies
- Internet Service Providers (ISPs)
- ICT companies
- Nongovernmental organizations
- Hospitals and health management organizations (HMOs)
- Pharmaceutical suppliers and distributors
- Supermarket chains

ENTRY-LEVEL JOB AND ENTREPRENEURSHIP OPPORTUNITIES

The assessment revealed various employment and entrepreneurial opportunities for youth in the ICT, agriculture, and health sectors (see table 1).

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Table 1. Viable work opportunities for youth, by sector

	Entry-level jobs	Entrepreneurship opportunities
ICT	<ul style="list-style-type: none"> • Junior programmers • System engineers • Procurement officers • IT technical support staff • Sales agents and customer care/rental care representatives for the telecommunications industry • Electricians • Data entry staff • Accounting and office administrative assistants 	<ul style="list-style-type: none"> • Lead generators and market researchers • Mobile phone sales and services, including retail opportunities in mobile money transfer services such as YU Cash, Zap and M-Pesa • Graphic designers
Agriculture	<ul style="list-style-type: none"> • Factory workers (ginners) • Machine operators • Receptionists and clerks for the cotton industry • Entry-level technical engineers for the sugarcane industry • E-commerce and marketing staff for the manufacturing industry • E-procurement and data entry staff for cash crop farming 	<ul style="list-style-type: none"> • Farmers (pineapple, cassava, maize) • Call centers agent advising farmers on agricultural issues • Agricultural information services agent • Agriculture input salesperson • Marketing at any level in the agricultural value chain, such as developing food kiosks in urban areas
Health	<ul style="list-style-type: none"> • Nurses • Laboratory technicians and attendants • Data entry clerks • Data collectors • Data analysts 	<ul style="list-style-type: none"> • Sanitation workers, specifically in plastic recycling and scrap metals • Software developers and managers for the health industry's Web-based Health Management Information Systems (HMIS)

TECHNICAL & SOFT SKILLS NEEDED BY EMPLOYERS

Employers in the Kenyan survey listed particular ICT, entrepreneurship, and life skills as the most essential for successful employment in the ICT, agriculture, and health sectors (see table 2).

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Table 2. Skills most needed by Kenyan employers

ICT related and other Technical skill
<ul style="list-style-type: none">• Computer programming• Computer and machine operating skills• Computer science/engineering (degree or diploma)• Graphic design• Mobile technology products• Basic it support• Web-based security systems• HMIS• Database management• Nursing• Electrical and electronic• Industrial maintenance
Entrepreneurship/administration skills
<ul style="list-style-type: none">• Business operations• Marketing and sales• Certified public accountant (CPA)• Quickbooks (accounting software)• Cooperative laws• Report writing
Soft skills
<ul style="list-style-type: none">• Honesty• Communication• Interpersonal skills• Leadership• Teamwork• Positive attitude• Hygiene/presentation• Initiative

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YOUTH ASSESSMENT

The rapid youth survey and the focus group discussions conducted for this assessment were designed to capture youth perspectives on employment and entrepreneurship. The youth survey was administered to 101 youth, while the focus group discussions were administered to 50 youth selected from the youth who took part in the survey. The questionnaire and focus group discussion protocols were developed and tested prior to being administered to the youth.

PERSPECTIVES ON FINDING EMPLOYMENT

Virtually all (99 percent) of the youth interviewed expressed a desire to work or run a small business to improve their living standards, gain financial stability, start families or support extended families, and to advance in their studies and careers. The few youth who were not seeking work were negatively impacted by drug abuse, a lack of employable skill sets, a dearth of work experience, and disillusionment at the prospects and pay scale of the non-skilled labor sector.

INTEREST IN WORKING IN HEALTH, AGRICULTURE, AND ICT SECTORS

The majority of the youth surveyed were interested in working in the ICT sector due to the lack of visible job opportunities in the agricultural and health sectors. However, youth expressed a desire to seek opportunities in agriculture and health if sustainable living wages could be earned there. It was particularly interesting that youth were willing to look beyond the social stigmas placed upon farming (viewed as the labor sector of rural and uneducated people) if the challenges to farming profitably could be overcome. These challenges include access to markets and prompt payment for commodities, availability of land for farming, and the capital investment required for farming and other agriculture related businesses.

YOUTH PERSPECTIVES ON EMPLOYMENT CHALLENGES

Surveyed youth pointed to a number of challenges in gaining and maintaining employment or establishing businesses. The challenges consisted of three types:

Personal

- A lack of skills needed for employment or the establishment of a business
- The lack of knowledge of markets
- Fear of taking on loans to start businesses
- Lack of capital and fear of failure
- Lack of business networks
- Stigma associated with farming and agriculture

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Employer

- Fear of harsh employers
- Being overworked and underpaid by employers operating outside of labor law parameters

Communal

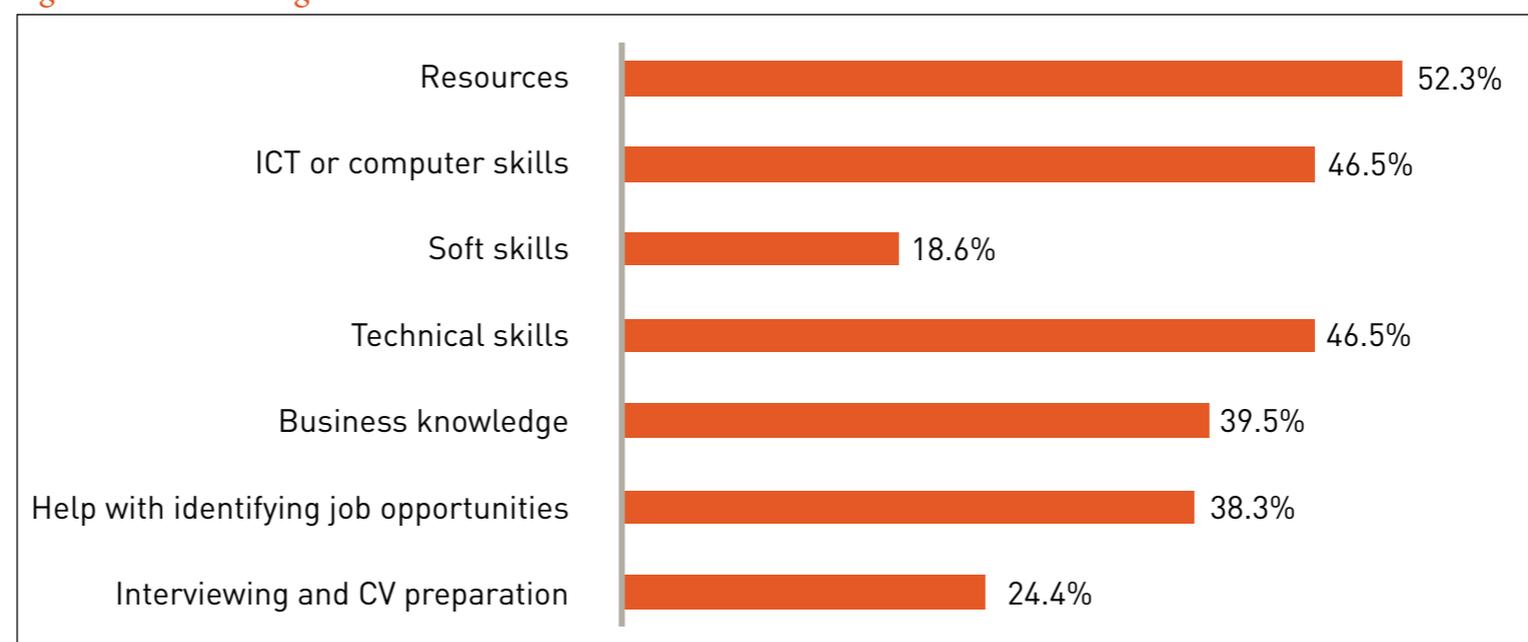
- Peer pressure and discouragement not to start businesses
- Intense competition in local communities saturated small enterprises
- Insecurity, especially in the informal settlements and rural areas
- The scarcity of jobs in local communities and the high costs of public transport which make it difficult for youth to commute to their work place.

Youth's perception of training needs

The majority of the youth felt that they needed additional skills training to get jobs, work effectively, or manage successful businesses (figure 1).

A proper and thorough training in life skills was also identified as a critical complement to the technical skill training required for employment and business development.

Figure 1. Youth training needs



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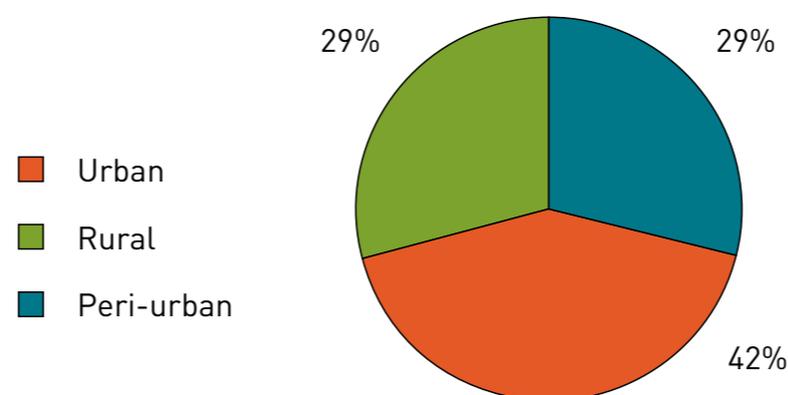
Youth Employability in Information & Communications Technology, Agriculture & Health: Rwanda Assessment Summary

CONTEXT

The principal objective of this assessment was to identify employment trends, establish the status of youth and their level of existing skills, and analyze technical training programs. The assessment was limited to young people aged 15–27 years old and to companies operating in the Information & Communications Technology (ICT), agriculture, and health sectors. A hundred youth, 36 employers, and more than 40 stakeholders participated in the survey.

Among youth surveyed, 55 percent were male. Most resided in urban areas (figure 1).

Figure 1. Participants distribution by residence



The assessment is informed by findings from a desk review, a field survey, and consultations with various stakeholders in Rwanda. The assessment was conducted March 18, 2011, to May 12, 2011. The respondents were selected from the Nyarugenge district of Kigali City and from the Rwamagana, Gatsibo, and Nyagatare districts of the Eastern Province.

This report consolidates the findings from the labor market and youth surveys and provides an analysis of the degree to which a mismatch occurs between existing technical training programs and the actual labor market needs. This report also highlights entrepreneurship opportunities for young people in the ICT, agriculture, and health sectors.

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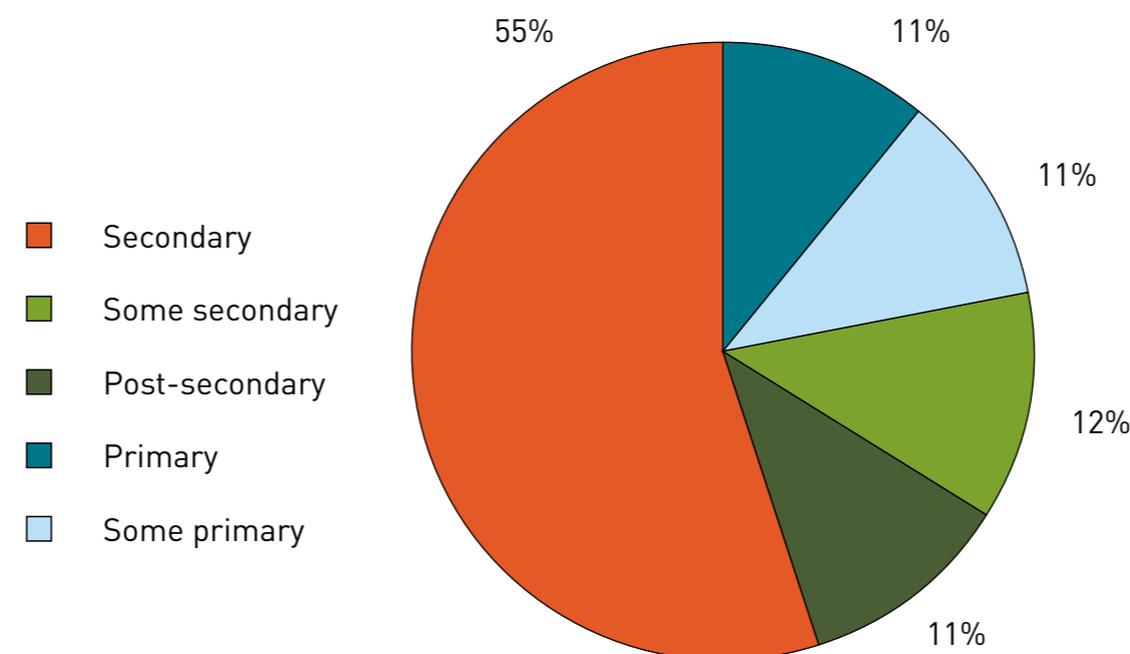
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OVERVIEW OF FINDINGS

Although there is undeniable evidence of linkages among education, training, and the labor market, a combination of pressing problems within the education sector and limited resources at the disposal of government mean that there is a shortage of programs that meet the needs of youth. For example, no program exists to address the school-to-work transition, a problem faced by most youth.

As reflected in figure 2, about 55 percent of youth completed secondary education, while 11 percent completed no more than primary education. The survey also established that youth unemployment is higher among those with secondary or post-secondary education than among those with some primary or primary education because most youth in the latter category have already opted for self-employment, while secondary and post-secondary graduates tend to wait for job opportunities.

Figure 2. Level of education attainment by the participants



The lack of skills and education among Rwandan youth puts them at a significant disadvantage with regards to finding work. Rwanda's 2009 national skills audit established that the short-term shortage of skilled workers is 60 percent in key sectors of the economy, notably agriculture, tourism, construction, finance, and mining. However, at present, youth do not have the qualifications to take advantage of these opportunities.

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For salaried workers, regardless of the sector, education remains the key determinant of whether a young person finds a decent job. For self-employed people, holding productive assets is a key determinant, though education is also important. Hence, in addition to developing entrepreneurship and business skills, access to credit is critical.

ICT APPLICATION

The use of ICTs is still very low among Rwandan companies across economic sectors. Most companies have yet to embrace the idea of using software, hardware and the Internet. Fortunately, the country is slowly but surely developing the required capacities. Nearly 97 percent of survey respondents own a mobile phone, 61 percent of all respondents (59 percent of young people) have access to a computer, and 56 percent of the total respondents have access to the Internet. The potential for ICT skills to boost youth employment should not be underestimated.

Indeed, Rwanda currently has in place a variety instruments for capturing, storing, and communicating information, including telephone lines (fixed and mobile), fax, photocopiers, computer hardware and software, and the Internet (e-mail and Web). However, the number of trained professionals in Rwanda's ICT sector is still quite low. Nevertheless, employers and stakeholders who participated in the assessment identified the following promising areas of job growth:

- Hardware maintenance and repair
- Software development supported by quality assurance and small scale applications
- Data entry, including documentation, back office processing, and bill preparation and accounting
- Networking
- Web development
- Multimedia production (graphic design, photography, and computer animation)
- Database management

Most companies surveyed acknowledge the need for ICT services but cannot afford to hire university graduates. These findings suggest that developing ICT skills among out-of-school youth would enable them to fill an important market need.

EMPLOYMENT TRENDS

In Rwanda, although “youth” refers to people aged 14–35, “youth employment” refers to work undertaken by those aged 16–35. Hence, the collection of national data on employment has not been exactly targeted. However, a look at population projections and occupations across sectors provide indications of employment parameters at the national level.

The service sector is now the fastest growing sector, which marks a change from the early 2000s, when the agriculture sector was responsible

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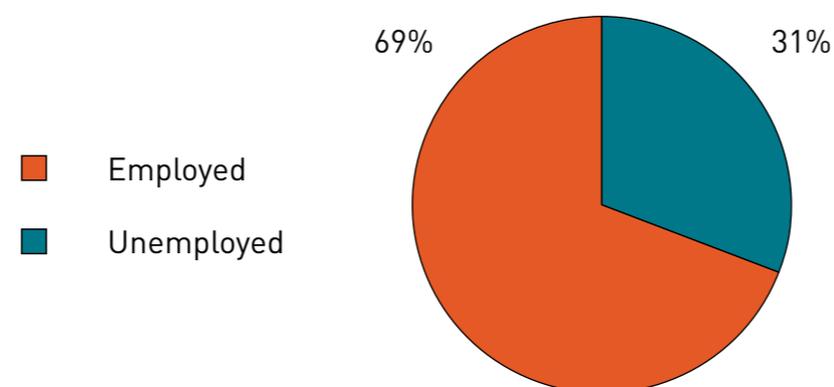
for generating income and expanding employment in the private sector. (Agriculture still creates jobs, but to a lesser extent). Although, the increasing number of youth migrating to urban centers creates challenges in some sectors, such as agriculture, the current urban growth experienced in Rwanda provides an opportunity for youth to take part in productive employment on better terms.

Most (87 percent) of the respondents see opportunities in the ICT sector, including computer maintenance and repair, secretarial work, teaching, and networking and multimedia production. In contrast, 18 percent of youth reported interested in obtaining jobs within the health sector, such as in counseling, medical insurance, data entry, and customer service. Similarly, 16 percent of youth surveyed reported an interest in employment opportunities within the agriculture sector, such as commodity trading, logistics, extension services, and crop production.

EMPLOYMENT STATUS OF YOUTH

As seen in figure 3, 69 percent of youth are unemployed. Figure 4 illustrates that most have been unemployed for more than a year.

Figure 3. Employment status of youth



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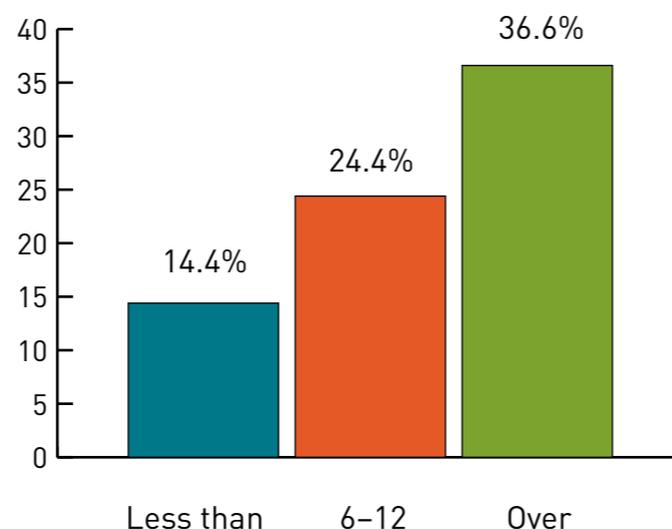
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Figure 4. Length of unemployment reported by participants



According to the assessment findings, in most urban areas of Rwanda, youth work as domestic helpers, street hawkers, luggage handlers, taxi drivers and conductors, cleaners, and construction helpers. Youth also work in the service and cottage industries, and in small factories or workshops as mechanics, metal workers, carpenters, tailors, machine operators, weavers, hotel and supermarket attendants, receptionists, bank tellers, barbers, and hairdressers.

Although 21 percent of the respondents expressed reservations about their readiness to find a job or start a small business, 79 percent were enthusiastic about learning a new skill to boost their employability, regardless of their current employment status. In other words, these young people feel that they are lacking skills in some aspects and require assistance in developing the appropriate skills to help them gain employment or become self-employed. See figure 5 for youth's perspective of what they need training on to increase their employability.

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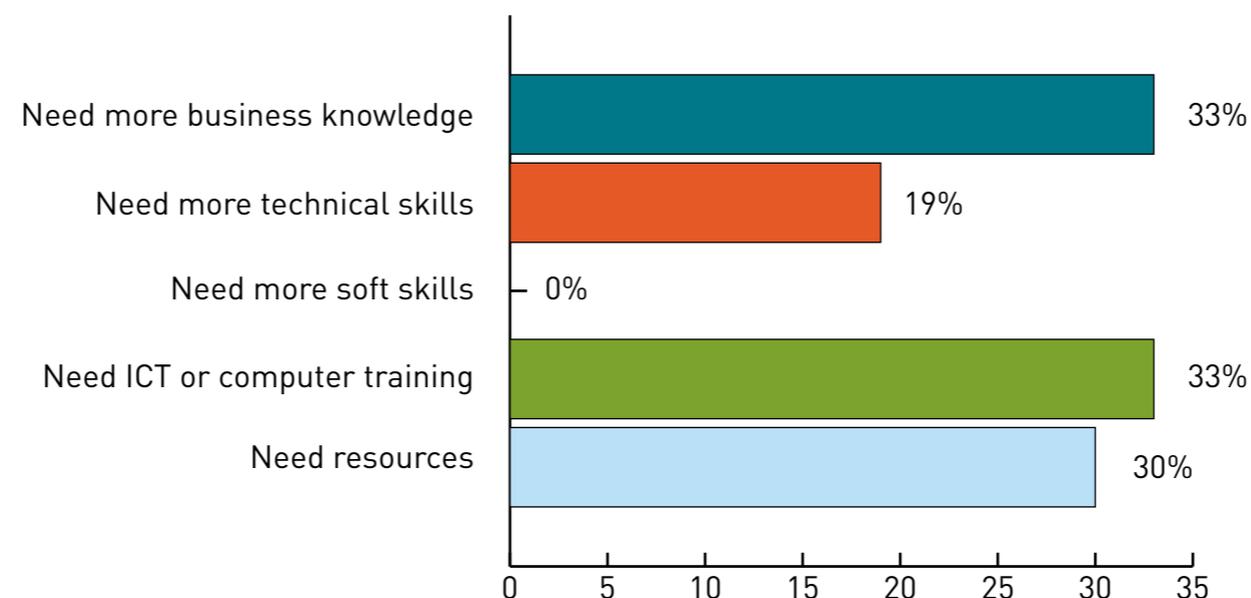
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Figure 5. Youth's perspective of training needs for employment



Although the young people surveyed seemed confident with their current levels of soft skills, every employer in the survey strongly stressed the lack of soft skills in young people. The skills employers rank high but generally do not find among young people are depicted in figure 6. In addition to being constrained by the general lack of skills, the employers' preference for experienced workers further compounds the challenges of youth employability.

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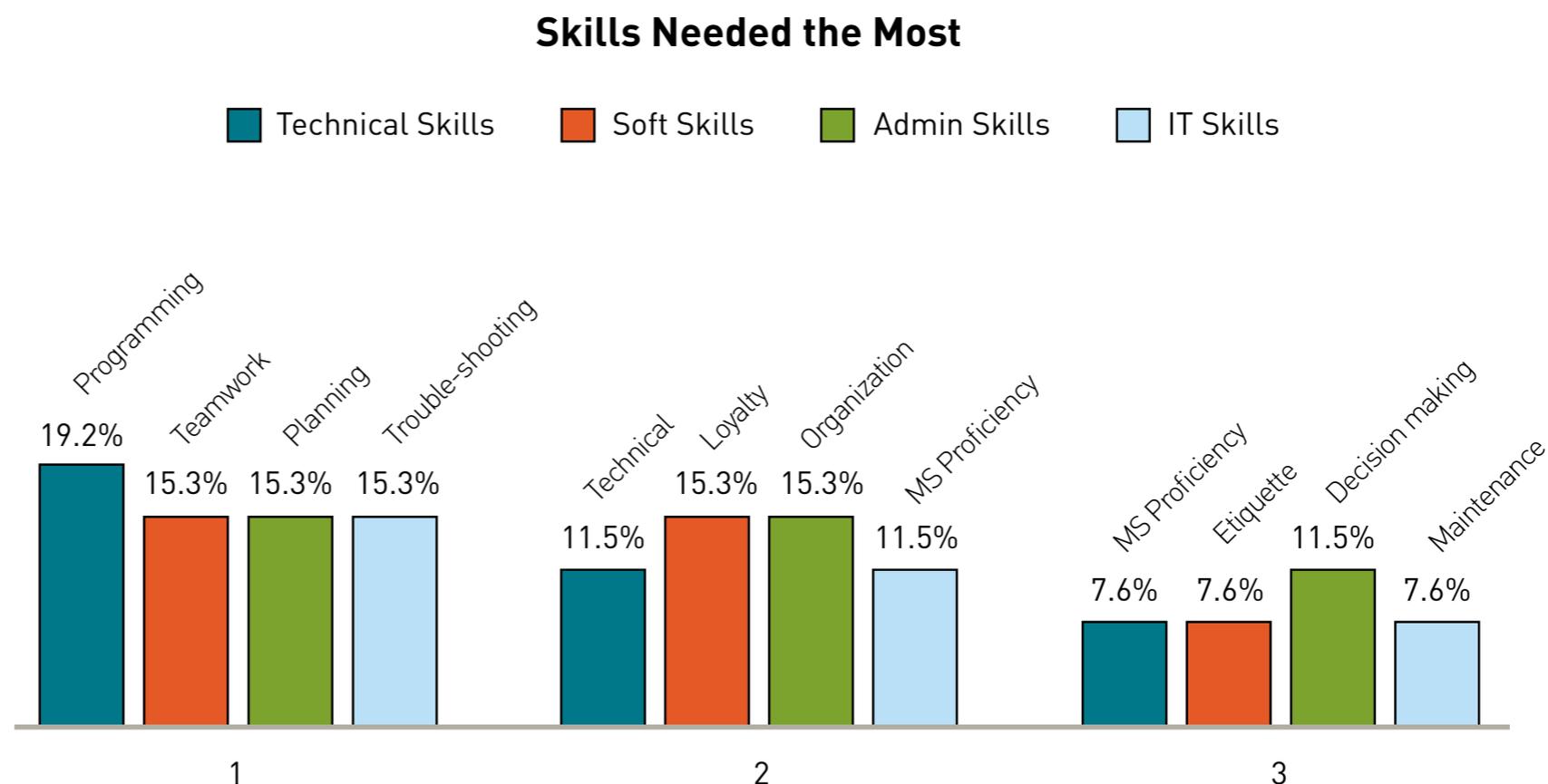
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Figure 6. Skill sets needed by the employers (1= ranked highest, 3 = ranked lowest)



According to the individual interviews, the low level of youth employability is caused by lack of skills and experience as well as inadequate social networks or helpful contacts.

EXISTING TRAINING PROGRAMS

A variety of training programs exist for Rwandan youth, but few target out-of-school youth as a distinct group. In 2007, there were as many as 201 public and private training providers in Rwanda. However, only 32 offered courses to primary school leavers. Overall, there were only 54 vocational training schools (of which 32 were private) offering training for skills development, and most of the courses were in tailoring and carpentry.

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ENTREPRENEURIAL OPPORTUNITIES

The assessment found that youth are interested in both employment and self-employment. Ninety percent of respondents were eager to establish businesses in the ICT, agriculture, and health sectors. More than half (52 percent) of the respondents saw opportunities in the ICT sector, including ICT equipment trading, cash power based trading (electricity), charging mobile phones, and establishing cyber cafés and training centers. While 35 percent saw opportunity for trading in agricultural commodities, including beans, maize, and cassava, only 3 percent saw opportunities in the health sector for establishing pharmacies and cleaning companies. Among youth respondents, 54 percent expressed a need for entrepreneurship training, including business planning, marketing, and resource mobilization.

CONCLUSION

There is a distinct mismatch between the current skill development programs and the job market skills demand. That is, the training provided by existing training programs is not need-based, so most trainees remain unemployed months after completing of the program. Addressing youth unemployment requires a multifaceted approach, including on on-job training, access to finance, and life skills, as well as specialized technical skills needed by the labor market.

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