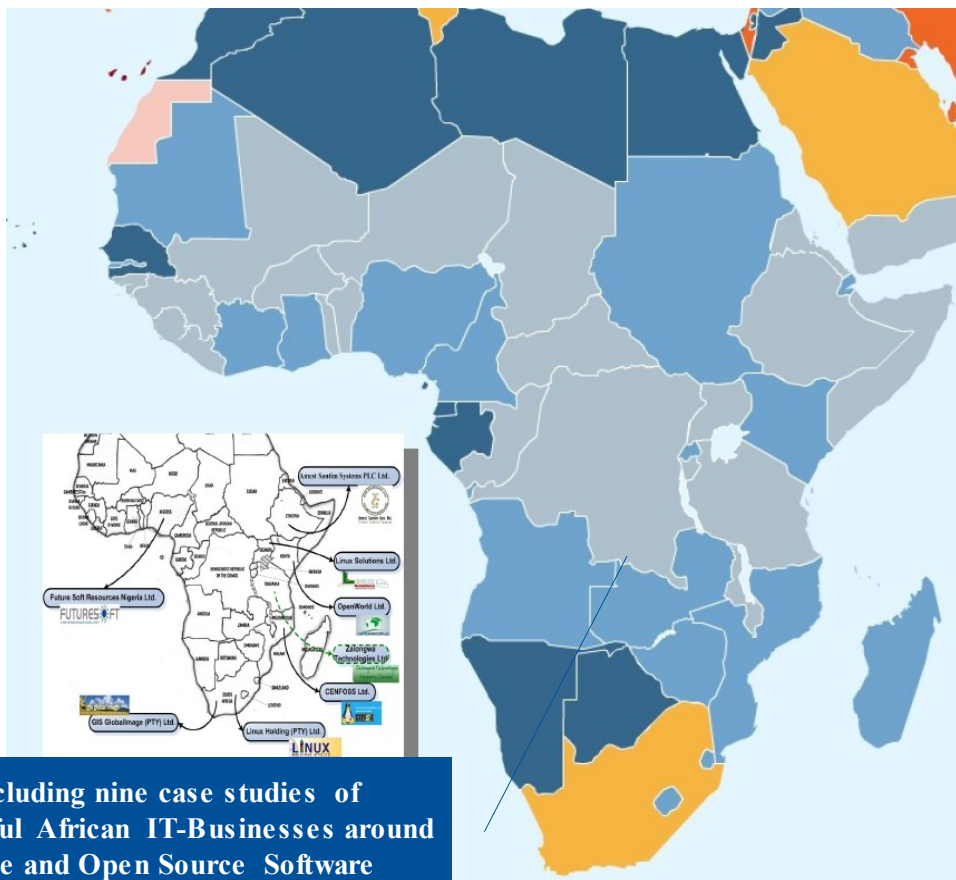


Creating Business and Learning Opportunities with Free and Open Source Software in Africa

## ict@innovation: Free your IT-Business in Africa! Module 6: FOSS TRAINING

### Advanced Training Material on African Free and Open Source Software (FOSS) Business Models for IT-SMEs



Including nine case studies of successful African IT-Businesses around Free and Open Source Software

<http://www.ict-innovation.fossfa.net>

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## About the material "ict@innovation: Free your IT-Business in Africa!"

"Free your IT-Business in Africa! - Advanced Training Material on African Free and Open Source Software (FOSS) Business Models for IT-SMEs" supports the building of knowledge and capacities in African small and medium ICT enterprises to make a business with Free and Open Source Software (FOSS). It aims to contribute to the growth of African ICT industries through spreading FOSS business models for enterprises in Africa.

Eight indepth case studies of African IT-businesses and organizations who successfully make a business around FOSS give concrete avenues for FOSS business models that work in Africa and are condensed in an African taxonomy of FOSS Business Models. The material has been collaboratively developed by FOSS experts from Africa and Europe for use as training material for experts and executive staff from IT businesses in Africa, ICT-associations, their member organisations, ICT-training institutions as well as universities and their trainers.

The Advanced African FOSS Business Models syllabus consists of 6 modules, spread along three thematic parts. The first part - *African FOSS Business Models* - introduces basic FOSS concepts and provides practical case studies across the African continent. Two modules are covered in this part of the syllabus; (i) Module 1: Introduction to Emerging FOSS Business Models and (ii) Module 2: African Business Models: Case Studies – including an African taxonomy of business models such as Software Selection, Software Installation, FOSS Training, Maintenance and Support, Software / Systems Migration, Consultancy, Software Localization and Internalization, FOSS Customization as well as Technical / Legal Certification.

The second part - *Knowledge and Skills for FOSS Entrepreneurs* - brings into focus FOSS communication and business skills which are deemed vital for businesses and may contribute immensely in help young entrepreneurs leverage FOSS to gain a competitive advantage. Innovative and cost effective tools and techniques, community building and networking, and FOSS strategies which are vital for starting and sustaining a viable FOSS business in Africa are also covered in this part of the syllabus. Three modules are covered in part two; (i) Module 3: Communicating FOSS, (ii) Module 4: Introduction to General Business Skills, and (iii) Module 5: FOSS Specific Business Knowledge and Skills.

Part three of the training material - **FOSS Training as a Business** – consists of one module which aims to foster understanding of some of the requirements for becoming an FOSS trainer, and identifying the opportunities that exist for FOSS training as a business in African as well as a global look at Linux training worldwide. For more information on the material, see <http://www.ict-innovation.fossfa.net>.

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- Module 6.4: Open Educational Resources and Open Content
- Module 6.5: Communication Skills

# MODULE 6

## FOSS TRAINING

**Created by:** Content Creation Community

**for** ict@innovation, FOSSFA/InWEnt

**Version / Date :** ICT\_INNO\_17/ May, 2010

### Introduction

FOSS Training has become a novel business opportunity for new and existing businesses as FOSS is becoming more and more mainstream. As more and more mature FOSS applications emerge, businesses who want to use them require training. Growing investment in FOSS applications are expected to continue in following years leading to growing training needs and opportunities. The Open World Forum road-map for 2020<sup>1</sup> predicts that 40% of jobs in IT will be FOSS related and highlight the challenges associated with the shortage of skilled FOSS professionals. The authors assume a 2% growth rate of IT employment annually, which translates directly into 1.5 million jobs in Europe i.e. the creation of 1.2 million completely new jobs (Open World Forum Roadmap, p 69). Thus, the modules in this topic will build on previous topics on basic FOSS concepts in Module 1, African FOSS business experiences as demonstrated by the case studies in Module 2 and some FOSS business and management skills (Modules 3 - 5) to addresses the skills and knowledge required to organise FOSS training in the African context.

### Learning Objectives

1. Understand some of the requirements for becoming a FOSS trainer.
2. Be able to identify and seize the opportunities that exist for FOSS training as a business.
3. Gain the knowledge and skills required to organise and provide FOSS training.
4. Appreciate the benefits of peer production of Open Educational Resources and Open Content.
5. Understand the crucial role of communication.

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1 <http://www.2020flossroadmap.org/>

## Sessions and Timetable

The entire content in this topic is estimated to be delivered in **2** days, with some variations within the modules. For instructional purposes, the content of this module can be delivered as proposed in the summarized table below.

Time	Session
9:00 – 10:30	<i>Completion of Module 5</i>
10:30 - 10:45	Coffee Break
10:45 - 12:15	<ul style="list-style-type: none"> <li>How to be a FOSS Trainer</li> </ul>
12:15- 13:30	Lunch
13:30 – 15:00	<ul style="list-style-type: none"> <li>FOSS Training as a Business</li> </ul>
15:00 – 15.15	Coffee Break
15:15-17:00	Invited talks: Discussion of FOSS training Experience, FOSS Business in Africa, FOSS in Government, FOSS in Education
	<i>Next day</i>
9:00 – 10:30	<ul style="list-style-type: none"> <li>Organising Training</li> </ul>
10:30 - 10:45	Coffee Break
10:45 - 12:15	<ul style="list-style-type: none"> <li>Training Material Development</li> </ul>
12:15- 13:30	Lunch
13:30 - 15:00	<ul style="list-style-type: none"> <li>Open Educational Resources and Open Content</li> </ul>
15:00 - 15:15	Coffee Break
15:15 - 17:00	<ul style="list-style-type: none"> <li>Training Communication Skills</li> <li>Training Communication Skills</li> <li>End of Module</li> </ul>

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## Module 6.1: How to be a FOSS Trainer

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### Duration:

1 hour

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### 6.1.1 FOSS Trainer Characteristics

Any good trainer is natural communicator with strong technical skills to provide his/her students with the right tools to work in the industry. The winning combination of the 'ideal' FOSS instructor includes:

- Winning personality and ability to communicate.
- Practical experience in FOSS applications.
- IT training experience.
- Ability to engage participants and relate content to their situation.
- Be inquisitive and have a passion for training.
- They should have the ability to teach themselves a program and then use their skills, knowledge and attitude to facilitate the transfer of that knowledge.
- Have an understanding of the philosophical underpinnings of the FOSS movement.

Currently, no specific certification roadmap exists for a FOSS trainer.

Trainers should continuously act and reflect. They should always look back on how to improve delivery of the training, learn from course evaluations and aspire to have a better understanding of the applications they teach. FOSS trainers should not see the software as different from proprietary software.

It is also important that trainers use the software they are training, in one way or another. In so doing, they become conversant with features and functionalities that the software provides and can transmit this knowledge to their trainees. It also provides the trainer with a sense of authority and confidence.

Trainers should see training as a stage production:

- There is the audience (participants).
- There is a stage (training room).
- The performance by the actor (trainer conducting the course).
- The applause (the feedback).

### 6.1.2 Types of Training Interventions

Potential trainers may need their skills to be upgraded in different ways. We can broadly distinguish between three types of training interventions for FOSS trainers:

- There are those who have the technical knowledge of FOSS packages and have been using certain packages, but have not conducted any training of any nature. This type of person needs to acquire the knowledge and skills on how to conduct FOSS training for adults.
- There are those who have the knowledge and skills on how to conduct ICT training for adults which they might have acquired through self-learning or having had attended a course, but have not conducted any FOSS training. Instead, they have conducted training in proprietary software. This type of trainer will need to be trained on FOSS packages.

- There are those who have conducted FOSS training courses and have the knowledge and skills on how to conduct training, but have not trained other trainers. This type will have to be trained on how to train other trainers.

Ideally, a new trainer should follow a trainer development program that may include delivering the content to a colleague and/or to a group of peers.

Part of the training curriculum for a train-the-trainer course may include topics of the [CompTIA's Certified Technical Trainer \(CTT+\)](#) curriculum or a similar programme.

## Questions

1. List the winning combination of an "ideal" FOSS trainer
2. Name a certificate which exists for trainers
3. Discuss the three types of training interventions
4. Why is it important that trainers use the software they will be training?
5. Is there a difference between a FOSS trainer and proprietary software trainer?

## Exercise

*Trainers are going to brainstorm the qualities a trainer should possess. The trainer will write the contributions on a flipchart.*

## Module 6.2: FOSS Training as a Business

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### Duration:

**2 hours**

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### 6.2.1 Identifying FOSS Business Opportunities

FOSS training can be undertaken as part of an existing business function, academic pursuit in educational institutions or as a sponsored group activity. The type of training method chosen will influence the revenue, steps to be taken, facilities and content.

If FOSS training is undertaken as part of an existing business function, then it could:

- leverage the company's competitive position in the industry.
- access a ready pool of participants from the company.
- co-share facilities with other courses, thus the investment is low.

If academic institutions are involved in FOSS training, then

- it could target students who might not yet have loyalty to proprietary software.
- it could be incorporated in Computer Science courses.
- cost might be reduced in the acquisition of licenses for proprietary software

If FOSS training is pursued as sponsored group activities, then

- it could include workshops, seminars, exhibitions
- it should be targeted
- the training duration should be short
- cost should be undertaken by the sponsor

Selection of candidates for FOSS training can be done using

- role/function in organisation

- educational background
- identified need

FOSS training curriculum should be comprehensive and detailed. It should include all topics covered for the equivalent proprietary software.

## 6.2.2 Case Study

Arnold Pietersen (CECS) provides some practical examples of FOSS training he conducted or intend to conduct, below.

In 2006, Arnold came across Open Workbench (which is the same type of programme as MS Project). He started using it for CECS' project and was impressed by the programme. It dawned upon him that this might be a useful tool for NGOs. Arnold visited the websites of some of the major training companies in South Africa to see what they offer with regard to MS Project 2003 Level 1. He then modelled the Open Workbench course based on the MS Project 2003 course outline. This he thought would provide for benchmarking or comparability. Since then he has conducted numerous courses by sending e-mails to NGOs and CBOs to announce course dates. Participants are now requesting for the Level 2 course. The last course was conducted with 16 participants. With improved marketing he surmise more course and regular courses could be conducted. Participants attending are from across the board: NGOs, CBOs, government, individuals, schools. The course is being charged at about 80% of what a MS Project course would cost. CECS now want to target students at universities who studies project management.

CECS received some money from OSISA to develop an open source course for entrepreneurs and latched onto TurboCASH. CECS have been conducting numerous courses for the past three years. A contracted trainer is conducting the course who install, train, supports TurboCASH as a business. The organisation have had requests from individuals and organisations especially Cape Town and Durban to attend the training course. There are very few companies offering TurboCASH courses, let one NGOs.

Last year July CECS started conducting Web Design Training Using Joomla courses which proves to be very popular. The courses are well-attended. CECS also derive other opportunities from conducting this course such as organisations wanting to contract the organisation to migrate their websites, to conduct on-site training, individuals and organisations wanting to purchase manuals. The manual is still very much work in progress. It was a question of do we spend a year or two trying to develop a "perfect" manual or do we start with some material and then built upon that as we gain experience. A scan was undertaken regarding the Joomla training environment in South Africa before CECS embarked on the training.

Arnold is now in the process of putting together a course for Ubuntu Linux for absolute beginners. Participants will bring their laptops to the course. The course will map to a certain extent to say a Windows XP Level 1/Beginners. He thinks that critical for the course is showing people how to install Ubuntu. When people go wrong at the partition stage, they then blame Ubuntu Linux for all their woes. Thus, we need to give them a solid understanding regarding installing Ubuntu Linux. This will be a pure end-user course.

It is difficult to estimate the demand for FOSS training. FOSS training can attract learners if the application has been widely adopted in the industry. As an example FREEBSD has been promoted by AfNOG over the years thus FREEBSD training is likely to attract more users. People are prepared to pay for courses, whether it is FOSS or proprietary, provided that these courses address their real business needs.

## 6.2.3 Identifying Training Opportunities

Training opportunities can be identified in the following ways:

- Surveys should be done to identify training needs.
- Identifying popular applications (e.g. by looking at downloads from sourceforge.net and freshmeat.net).
- Subscribing to newsletters, mailing lists and participating in relevant forums.
- Attending (either actively or passively) ICT conferences, workshops and other events such as Software Freedom Day.
- Accessing market reports, e.g. Gartner, Government, etc.
- Identify FOSS applications that may satisfy market needs.
- Participating in relevant tenders, request for proposals, requested for interest, pre-qualification exercises, etc.

## 6.2.4 Marketing of Training Courses

- Direct advertising through local press, magazines and professional publications.
- Register and contribute in forums, mailing lists, blogs, etc.
- Taking advantage of ICT conferences, workshops and other events such as Software Freedom Day as a marketing opportunity.
- Contributing articles to the local press and other media houses.
- Maintaining a presence on website portals that bring together trainers and potential trainees (e.g. <http://www.flosslit.org.za/>).
- Organise computer literacy events in schools, educational institutions, etc.

## 6.2.5 FOSS Certifications

What follows below are courses with an international repute. We provide a brief description of the courses.

### OpenICDL

<http://www.icdl.org.za>

OpenICDL refers to the International Computer Driving Licence based on open source software.

OpenICDL is a test of practical skills and competencies and consists of seven separate modules covering computer theory and practice. To achieve OpenICDL certification, a Candidate must successfully pass a test in all seven modules.

OpenICDL Module 1 is a theoretical test of computing knowledge at a general level and modules 2-7 are practical skills tests. The following are the modules:

- Concepts of Information Technology
- Using the Computer and Managing Files (Ubuntu Linux)
- Word Processing (OpenOffice.org Writer)
- Spreadsheets (OpenOffice.org Calc)
- Database (OpenOffice.org Base)
- Presentation (OpenOffice.org Impress)
- Information and Communication (Mozilla Firefox & Mozilla Thunderbird)

You must be registered with the [ICDL Foundation](#) in order to offer the OpenICDL.

## Linux Professional Institute Certification (LPIC)

<http://www.lpi.org>

The Linux Professional Institute Certification (LPIC) program is designed to certify the competency of IT professionals using the Linux operating system and its associated tools. It is designed to be distribution neutral, following the Linux Standard Base and other relevant standards and conventions.

The LPIC program is designed in multiple levels. Determining which tasks were suitable to each level was done using a "Job Task Analysis" (JTA) survey. As with all of the LPIC exam development processes, the JTA was developed and executed using recognized psychometric processes, to ensure its relevance and high quality.

The LPIC program consists of three levels of certification: LPIC-1, LPIC-2 and LPIC-3.

### Junior Level Linux Professional (LPIC-1)



- Pre-Requisites: None
- Requirements: Passing Exams 101 and 102
- Overview of Tasks: To pass Level 1 someone should be able to:
- Work at the Linux command line
- Perform easy maintenance tasks: help out users, add users to a larger system, backup & restore, shutdown & reboot
- Install and configure a workstation (including X) and connect it to a LAN, or a stand-alone PC via modem to the Internet.

### Advanced Level Linux Professional (LPIC-2)



- Pre-Requisites: You must have an active LPIC-1 certification to receive LPIC-2 certification, but the LPIC-1 and LPIC-2 exams may be taken in any order.
- Requirements: Passing Exams 201 and 202
- Overview of Tasks: To pass Level 2 someone should be able to:
- Administer a small to medium-sized site
- Plan, implement, maintain, keep consistent, secure, and troubleshoot a small mixed (MS, Linux) network, including a:
  - LAN server (samba)
  - Internet Gateway (firewall, proxy, mail, news)

- Internet Server (webserver, FTP server)
- Supervise assistants
- Advise management on automation and purchases

## Senior Level Linux Professional (LPIC-3)



The LPIC-3 Certification program represents the culmination of LPI's Certification Program.

LPIC-3 is designed for the "enterprise-level" Linux professional. The program has been developed with the input of hundreds of Linux professionals from around the globe and with input from some of the world's leading technology companies. It also represents the highest level of professional, distribution-neutral Linux certification within the industry.

The LPIC-3 program consists of a single exam for LPIC-3 "Core" designation.

## **Ubuntu Certifications**

<http://www.ubuntu.com>

The following are the Ubuntu Certifications:

- Ubuntu Certified Professional
- Deploying Ubuntu Server in an Enterprise Environment
- Ubuntu Desktop Training

### Ubuntu Certified Professional

The Ubuntu Certified Professional (UCP) is a training certification based on the LPI level 1 certification. To earn the UCP, candidates are required to pass the LPI 101, LPI 102 and the Ubuntu 199 exams. Exams can be taken in any order. Two, five day courses, Ubuntu Professional Courses 1 & 2, will assist System Administrators to pass the required exams and achieve the Ubuntu Certified Professional certification.

The certification tests student's ability to:

- Install and configure Ubuntu systems
- Perform routine administration tasks: boot and shut down the system, manage user accounts and file systems, and maintain system security
- Configure network connectivity and key network services
- Work productively at the Linux command line

### Deploying Ubuntu Server in an Enterprise

This hands-on course will provide participants with the skills they need to deploy, configure and maintain secure Ubuntu Server Edition within the enterprise infrastructure. The course is based on Ubuntu 8.04 LTS and will help system administrators to implement services at an advanced level. Extensive lab exercises in a multi-server virtual machine environment will help attendees put their new skills into practice.

If you are an experienced Linux or Unix system administrator working in an organisation, which is about to, or has already, deployed Ubuntu desktop and servers in the office, this course is for you!

After completing this course, you will be able to:

- Install and deploy an Ubuntu Server in an enterprise environment
- Use Debian package management tools to:
  - Install, configure, update and upgrade packages
  - Set up a repository
  - Manage a mirror service
  - Automate updates
  - Monitor server status remotely
  - Define and implement a Backup strategy
- Create and deploy virtual Machines using KVM and libvirt
- Manage directory services and authentication using OpenLDAP and Kerberos
- Keep servers as secure as possible

## Ubuntu Desktop Training

This course provides both home and office users with hands on training on Ubuntu. No prior knowledge of Ubuntu is required, although computer literacy is assumed and is a pre-requisite. Ubuntu 8.04 LTS must be installed on the computer hard disk before starting this course. The Ubuntu desktop course is designed to be modular. If all lessons are studied in a classroom, it should be completed within two full days. However, topics and lessons can be selected as required and a day's content designed to suit the key learning objectives.

## **Questions**

1. List companies, organisations or schools who is conducting FOSS education and training in your country
2. Critique or support the case study in 6.2.2
3. Make a list of other FOSS certifications which might be available
4. What are the obstacles, if any, you might perceive in people not wanting to attend FOSS training courses?
5. Which FOSS certification is more recognisable in your country?

## **Exercise 1**

*Participants will engage in an individual exercise the list the benefits of training. Their responses will result in a plenary/discussion.*

## **Exercise 2**

*Participants will list their knowledge of FOSS certifications/training. Participants with similar lists will be grouped to discuss and present the benefits of each certification/training.*

## Module 6.3: Organising Trainings

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Duration:

2 hours

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### 6.3.1 Course Design and Curriculum Development

- Explore curricula for equivalent software (e.g. Open Workbench, OpenProj and MS Project) and use these as a benchmark (aim higher)
- Provide a benchmark for comparability
- Tailor the curriculum to what is termed as the unit standards (smallest element of learning – a case of South Africa)
- Develop lesson plans
- Curricula should have clear learning objectives
- Adapt where feasible from existing commercial curriculum

### 6.3.2 Course Material Development

Professionally designed and pedagogically sound course material will be important. Some of the issues that should be considered are:

- The course material should be peer-reviewed by placing it on a wiki for comments and input.
- Exercises should be relevant
- The course materials should be graphically-rich and be of a step-by-step nature
- The layout of the course material should be done in FOSS desktop publishing (DTP) or graphic design program
- The licensing of the course material depending on the available types of licenses
- The continuous updating of the material in relation to new versions of the software being released
- The course material should be translated in the mainstream languages in Africa.
- A facilitators guide should also be developed
- The development of the course material should take lessons from existing courseware for similar types of software.

### 6.3.3 Licensing of Course Material

#### Creative Commons [<http://www.creativecommons.com>]

The Creative Commons licenses provide everyone from individual authors and artists to large companies and institutions a simple, standardised way to grant copyright permissions to their creative work such as the development of course material. The Creative Commons licenses enable people to easily change their copyright terms from the default of “*all rights reserved*” to “*some rights reserved*.”

For example, a developed training manual could be licensed under a Creative Commons Attribution-ShareAlike licence. This license lets others remix, tweak, and build upon your work even for commercial reasons, as long as they credit you and license their new creations under the identical terms. This license is often compared to free software licenses. All new works based on yours will carry the same license, so any derivatives will also allow commercial use.



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*Using the above two URLs and your experience, copy and complete the table below:*

Type of creative commons Licence	Usefulness for	
	FOSS business	FOSS Training
1)		
2)		
3)		

### 6.3.4 Preparing Yourself for Class

Preparations can be the most important part of your instructional day. Time spent before trainees arrive often has a direct effect on all aspects of the day.

As a trainer, you should prepare in three keys areas:

- yourself
- the classroom, and
- the trainees

As you prepare yourself for a class, consider the following areas for preparation:

#### 1. Materials

Checklists are an excellent way to guarantee that you have all of the necessary materials for the day. A checklist contains two types of items: The first category includes obvious items that you’ll never forget, such as your trainer’s manual. The second category includes unique supplies, like extra kokis. When preparing to teach, trainers often forget materials from the second category.

#### 2. Instruction

There are two areas in which you should be prepared: knowledge of the content and presenting the materials effectively. The most common challenge that you will face is trying to learn the content fluently of the course is to focus on the material that must be learned.

To prepare yourself for a teaching a new course:

1. Work through the course as many times as needed. Write any questions you may have about the content, but do not look for answers yet. Many of your questions may be answered later in the course.
2. Networking with another trainer(s). Set up a time to meet with another trainer(s) who also teaches the course and bring the unanswered questions you have.
3. Research. Even after meeting with another trainer(s), you might not feel comfortable with all the areas. Now it's time to research those areas.

## Work on Your Presentation

The following are four approaches to preparing your presentation. Unlike the steps mentioned above, these are not sequential order, but rather in order of effectiveness from least to most:

- Mirroring - Alone, observe yourself in a mirror.
- Verbal - Informally, with a friend or co-worker (preferably someone who is not familiar with the course content) as an audience.
- Desert Run - Alone, in an empty classroom.
- Dry Run - In a classroom with friends or co-workers acting as trainee.

## Rehearsal

You need to know your materials thoroughly before you start to train. A problem might arise where you focus on the training materials but not on how you are going to present it or how the trainees are going to use them. By looking at aims, objectives and purpose you will avoid this trap.

## Timing

Timing is one of the main problems with new or inexperienced trainers. How long does it take? To some extent it takes as long as you have got - but this is an unsatisfactory answer. How then do you plan a day's training?

Start with a page of A4 paper and put the start time at the top and the end time at the bottom.

Then you need to work on the following estimates; depending on the size of the group:

- Allow 15 - 30 minutes at the start for introductions and housekeeping
- Allow 15 - 20 minutes for expectations and fears
- Allow 15 - 30 minutes at end for final review (and evaluation).
- Slot in TEA, LUNCH and COFFEE BREAKS.
- Examine AIMS and OBJECTIVES.
- Write these exercises and allocate approximate timings. Do this by doing the exercise yourself and multiplying the time you took by 5 to get to a realistic time for your trainees
- Prepare a spare exercise for every session (for those who go faster than everyone else)
- Fit exercises and handouts (including reading time) into plan.
- Fit topic/content explanations into "missing" gaps!!
- Set one exercise per objective.

Tip: For training sessions of less than one day use the same technique but reduce the introduction and review times. Obviously you may not lose so much time with breaks, but remember that everyone needs to have a break every 90 minutes!

With a carefully written aim, objective and purpose for every session you will be able to rehearse your sessions in advance.

## Notes

Ensure that you have brief notes on pages or card that you can refer to where necessary. Do not write out a total script: unlike an actor you are in control of what you say, not merely repeating someone else's words.

## Materials and Props

Just as an actor has materials and props, you too need these as a trainer. Ensure that you specify what equipment you need in advance and that you have back-up if something fails.

Always get to the room 30 minutes before the trainees arrive. You will need to set out the training manuals, check if the equipment works, write up some flip charts, find out where the toilets are and about fire drills and emergency exits, lunch and break times and to settle yourself before your 'performance'.

Additional props that most trainers carry are such things as:

- Flip chart pens
- White board pens
- Spare exercises
- Tent card with the trainees names on it
- Pair of scissors

[www.cecs.org.za](http://www.cecs.org.za)

## 6.3.5 Preparing Your Training Room

### Physical Setup

How you arrange the furniture in your classroom can effect both the learning environment, and the type of interaction that can take place among the trainees. Seating can affect the availability of an instructor to a trainee, and can also influence the effectiveness of media, such as overheads or trainer screen. Instruction can be facilitated or hindered depending on the amount of interaction allowed between trainees.

An effective classroom setup and tear down checklist helps guarantees a successful classroom for the next class. Trainees and instructors expect occasional hardware problems, but a trainer should do everything possible to control the classroom environment.

## 6.3.6 Beginning the Training Session

### Addressing Trainees Expectations

It's important that you address trainees' expectations as early in the day as possible. What you do in those first few moments of the day can have significant impact on the rest of the day. The following are sum of examples on how you can begin your day.

- Discuss the facilities - This lowers trainees anxiety about the new environment bar outside pressure (phone for outside calls, rest room and so forth). Be sure to discuss the environment both outside and inside the classroom.
- Write your schedule on board - This allows trainees to see a direction for a day and to get feel that they are in the right place.
- Preview training manual - This shows trainees the backup support materials for the information about to be taught and can lower anxiety. Be sure to review the topics to be covered as well as the way in which the training manual is to be used.
- Introduction - These help to create an open environment. Encourage the trainees to introduce themselves by sharing such information as their names, the schools they from, the grades they are teaching, their computer experience and their expectations. This will also help them to relate to their peers who come to class with similar abilities.
- Take this opportunity to encourage questions and to establish a friendly, relaxed atmosphere. Indicate whether they should take notes or move ahead in the course manual, and hat their primary focus for the day should be.
- You might also suggest your preference about how the equipment is treated and whether it's appropriate to bring refreshment to the workstation. Indicate when it is appropriate to interact with another trainee.

### 6.3.7 Ending Your Training Session

Your training day should not just stop; it should be end with closure. Just as your initial statements set the tune for the day, your closing statement should complete the impression of the successful day of training. In addition to exiting from the software, answering final questions, and complementing the evaluation form you can:

- Discuss “What’s next”. Encourage trainee to arrange practice time and recommend that they find a job-relevant task to practice with. Review outlines for advanced-level courses.
- Advertise continuing support service, if available. Encourage learners by reinforcing the use of books and online services as effective help system.

### Questions

1. List some of the steps involved in the design of a course/curriculum
2. List and discuss two licenses available for course material
3. Why should the development of FOSS training content take cognisance of the commercial world for proprietary software
4. Why is it important to have course material in indigenous languages?
5. Discuss how you should prepare yourself for class.

### Exercise

*Participants will brainstorm in groups of 4 preparing a checklist for organising training. The responses of the participants will be captured on a flipcart, which they will put on the wall.*

## Module 6.4: Open Educational Resources and Open Content

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### Duration:

2 hours

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### 6.4.1 Open Educational Resources

[http://en.wikipedia.org/wiki/Open\\_educational\\_resources](http://en.wikipedia.org/wiki/Open_educational_resources)

Open educational resources (OER) are an Internet empowered worldwide community effort to create an education commons.

The term "open educational resources" was first adopted at UNESCO's 2002 Forum on the Impact of Open Courseware for Higher Education in Developing Countries funded by the William and Flora Hewlett Foundation. Open educational resources are educational materials and resources offered freely and openly for anyone to use and under some licenses to re-mix, improve and redistribute. Open educational resources include:

- Learning content: full courses, course materials, content modules, learning objects, collections, and journals.
- Tools: Software to support the creation, delivery, use and improvement of open learning content including searching and organisation of content, content and learning management systems, content development tools, and on-line learning communities.
- Implementation resources: Intellectual property licenses to promote open publishing of materials, design-principles, and localisation of content.

### History

From 24 October to 2 December 2005 the UNESCO on-line Forum Open course content for higher education took place.

In September 2006, the Third Annual Open Education Conference (Community, Culture and Content) was held in Logan, Utah. The last conference was held on September 24-27, 2007 in Logan, Utah.

In June 2007, educators at the iCommons iSummit in Dubrovnik joined the open movement worldwide to showcase emerging open education initiatives and to explore ways to better create, share and evolve open educational materials.

In January 2008 The Cape Town Open Education Declaration was published.

### OER and Open Source

Since 2005 there has been a marked increase in the Open Educational Resource (OER) movement and in Open Educational Licenses (like Creative Commons). Many of the projects on OER were funded by the William and Flora Hewlett Foundation, and partly also by the Shuttleworth Foundation that focuses on projects concerning collaborative content creation. There has been a strong international debate on how to apply OER in practice and the UNESCO chaired a vivid discussion on this through its International Institute of Educational Planning (IIEP).

### Alignment With Open Source Software Community

By the second half of 2006 it also became clear to some of the forerunners that OER and Free/Libre Open Source Software (FLOSS) do somehow belong together. As a result, the discussion groups of IIEP on OER and FOSS were merged and forces were further joined through

*[ict@innovation: Free your IT-Business in Africa! Advanced Training Material on African Free and Open Source Software (FOSS) Business Models for IT-SMEs] Created during the initiative "ict@innovation - Creating Business and Learning Opportunities with Free and Open Source Software in Africa", a programme of FOSSFA and InWEnt – Capacity Building International, Germany. For more information see [www.ict-innovation.fossfafa.net](http://www.ict-innovation.fossfafa.net) / Provided under a Creative Commons Attribution-Share Alike 3.0 Germany License. Copyright: FOSSFA & InWEnt*

mergers with a related OECD campaign.

What has still not become clear by now to most actors in the OER domain is that there are further links between the OER and the Free / Libre Open Source Software (FLOSS) movements, beyond the principles of "FREE" and "OPEN". The FOSS model stands for more than this and, like e.g. Wikipedia, shows how users can become active "resource" creators and how those resources can be re-used and freely maintained. In OER on the other hand a focus is still on the traditional way of resource creation and participant roles.

## Best Practices and Communities for OER Contributors

FOSS communities are today known for producing good quality software using a different development approach than proprietary software producers. FOSS is built by a community of volunteers and might be backed by companies that generate their revenues by providing services related to the software. In more recent years FOSS communities also gained attention for their community production and support models and regarding their way of knowledge creation and learning. FOSS communities possess many characteristics that educational communities could benefit by adopting:

1. Open and inclusive ethos: everyone can participate, no charges, no deadlines, life long participation
2. Up to date content; everyone can add, edit and update the content
3. Materials are usually the product of many authors with many contributions from people other than authors
4. Frequent releases and updates where product features and community structures are the result of a continuous re-negotiation / reflection process within a continuous development cycle
5. Prior learning outcomes and processes are systematically available through mailing lists, forums, commented code and further instructional materials (re-use)
6. A large support network; provided voluntarily by the community member in a collaborative manner nearly 24/7
7. Free Riders (lurker) welcome paradox – the more the better
8. New ICT solutions are adapted early by the community

Education professionals may be aware that FOSS-like principles can benefit education, but there has been no systematic and comprehensive approach to map and transfer those principles, or to develop new educational models and scenarios around them. The European Union funded FLOSSCom project is likely to be the first attempt to map the open source landscape from an educational point of view, but further research and work still remains to be done.

However, Teachers Without Borders, a non-profit based in Seattle, is currently developing a new OER website where members can take courses, discuss their findings with people around the world, and publish their work, all on the same website. Their goal is to connect educators and learners from around the world and give free access to a wide variety of courses, thus helping to close the education divide.

### 6.4.2 Open Content

<http://www.wikipedia.org>

Open content, a neologism coined by analogy with "open source", describes any kind of creative work published in a format that explicitly allows copying and modifying of its information by anyone, not exclusively by a closed organization, firm or individual. The largest open content project is Wikipedia.

## Technical Definition

Work on a technical definition for open content has been undertaken by the Open Knowledge Foundation. The Open Knowledge Definition (OKD) gives a set of conditions for openness in knowledge - much as the Open Source Definition does for open-source software. Content can be either in the public domain or under a license which allows re-distribution and re-use, such as Creative Commons Attribution and Attribution-Sharealike licenses or the GFDL. It is worth noting that the OKD covers open data as well as open content.

## History

It is possible that the first documented case of open content was the Royal Society, which aspired to share information across the globe as a public enterprise. The term "open content" was first used in the modern context by David Wiley, then a graduate student at Brigham Young University, who founded the Open Content Project and put together the first content-specific (non-software) license in 1998, with input from Eric Raymond, Tim O'Reilly, and others.

## Questions

1. Define Open Educational Resources.
2. Define Open Content.
3. What does Open Educational Resources include?
4. What can educational communities learn from FOSS communities?
5. Contrast Open Educational Resources with Open Content.

## Exercise

*Participants should brainstorm in groups of 5 the importance of open educational resources open content for the advancement of free/libre and open source software. A rapporteur will provide feedback in a plenary.*

## Module 6.5: Communication Skills

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**Duration:**

**4 hours**

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### 6.5.1 The Four Learning Styles

As a trainer, you will be working with trainees of a variety of learning styles different from your own. Knowing your learning style means you can work with it to deliver a training program that uses your strengths and meets the needs of your trainees.

#### If you are the Divergent Learning Style...

You are best at using the Concrete Experience (CE) and Reflective Observation (RO) steps in learning. If this is your style, you probably have the ability to view specific situations from many perspectives. For example, you may enjoy brainstorming and small group discussions. You also like to gather information and probably have broad interests. Your tendency may be to watch events rather than participate in them.

To increase your learning power you also need to place emphasis on the Abstract Conceptualization (AC) and Active Experimentation (AE) steps in the learning process. This means forming conclusions from your information, planning the application of these conclusions and actually implementing them.

For example, after watching a role play or listening to a discussion, summarise your observations into clear conclusions. Then decide how and when to test these conclusions in your own situations. Establish criteria to evaluate if the new idea really worked. Do this at the end of every activity in which you are an observer.

To further increase your learning power, take a more active role in the workshop than you might normally choose. Volunteer to be in the role plays, or to lead group discussions. This may be uncomfortable at first but it will give you an opportunity to experiment with your conclusions. It will also give you more experience with trial-and-error learning, something you may tend to avoid in real-life situations.

You may find it useful to discuss workshop topics with someone who has a Converger learning style. This person will help you see possible conclusions and applications you might overlook. You in turn may help them see information they might overlook, and develop more perspective.

You may have a tendency to concentrate on the human side of problems or topics or exercises. This reflects your ability to understand or to sympathise with others' feelings or points of view, but you may also have a tendency to avoid drawing conclusions about the quantitative or technical aspects of the situation.

Try to develop these skills:

- Collecting and analyzing numerical data.
- Looking for overall patterns in any feedback you get.
- Putting your own feelings aside for a moment and taking a more objective look.

#### If you are the Assimilative Style ...

You are best at using the Reflective Observation (RO) and Abstract Conceptualization (AC) steps in the learning process. If this is your style, you have the ability to create theoretical models (ideas that predict outcomes and descriptions of how different factors interact). You most likely enjoy



inductive reasoning and distilling disparate observations into logical explanations. To increase your learning power, you also need to place more emphasis on the Active Experimentation (AE) and Concrete Experience (CE) steps in the learning process. This involves speeding up your learning cycle by moving into action sooner.

For example, after watching a role play or listening to a discussion, think about ways to immediately apply your conclusions. Look for opportunities to test your new idea during the workshop and personally experience the results. This may require you to conceptualize smaller scale experiments, not the large scale efforts you may prefer. To further increase your learning, be more aware of the feelings and reactions of individuals (including yourself). You may have a tendency to discount intuitive or emotional information. However, much can be learned from a person's tone of voice, facial expressions, and other body language. Much of this data is preliminary in nature and hard to analyse in a logical fashion, but it provides an early warning about how things are going or if an idea has been understood.

You may have a preference for examining the quantitative or "thing" aspects of a situation. Your conclusions may be based primarily on policies, official relations, or formulas developed in other situations. This can cause you to be over-cautious about experimenting and miss opportunities for learning. No two situations are exactly alike. Put more effort into trying ideas, skills, or concepts. Then pay attention to the way things actually happen. It is often different than the way things are "supposed" to happen. Your ability to deal with non-quantitative data will increase if you get involved in interpersonal activities (role plays, simulations, discussions) more frequently. Take an active role and express your feelings. Others will do the same and this will give you experience handling this data.

Enter into discussions with people whose primary learning style is Accommodative. Note the value they place on intuition as a decision-making device. Research shows that in many situations intuition is more effective than logic. Try to implement their suggestions even if they can't provide a supporting rationale, or perhaps you can help them think through the rationale.

Try to add these learning skills:

- Seeking and exploring possibilities
- Influencing others
- Being personally involved
- Dealing with the people side of issues you work on, particularly how to get the support of key individuals whose help you will need

## **If you are the Convergent Style...**

You are best at using the Abstract Conceptualization and Active Experimentation steps in the learning process. If this is your style, you have the ability to find practical application for ideas, concepts, and theories. In particular, you enjoy situations in which there is a single of best answer to a question or problem. You may usually assume there is one best answer and use technical analysis to reveal it. You too may prefer to deal with technical issues rather than people issues.

To increase your learning power you need to place even more emphasis on the Concrete Experience and Reflective Observation steps in the learning process. This means placing a higher value on gathering and understanding non-quantitative information by looking at a situation from different perspectives. The result may seem to slow your learning process. In fact, it will speed the long-term accuracy by ensuring you are learning the most important things.

For example, while watching a role play or listening to a lecture, you may be thinking about how the topic or technique applies to your situation. Before making a decision, however, try to get other people's perspectives. Listen to their ideas, comments, and questions. You may discover the situation has elements you weren't considering. This may influence how you apply your learning.

To further increase your learning, try to take a less active role in the workshop than you might usually take. Spend some time really listening to others' ideas. Try to see the world as they see it, to understand their feelings and values. Play an observer role from time to time and avoid making judgments or decisions about how well others are doing. Instead, try to understand why they are saying or doing something. This may lead you to new and eventually useful information.

You will find it important to discuss workshop topics with someone who has a Divergent learning style. This person will see both questions and possibilities you might tend to ignore or avoid. You may help them see how to apply some of their ideas.

You may have a tendency to concentrate on the "things" side of problems, topics, or exercises. You may underestimate the impact people's values and emotions have on the way systems actually work. Avoid coming to quick conclusions.

Try to add these skills:

- Listening with an open mind
- Gathering information
- Imagining the implications of situations

## **If you are the Accommodative Style ...**

You are best at using the Active Experimentation (AE) and Concrete Learning (CL) steps in the learning process. If this is your style, you have the ability to learn primarily from hands-on experience. You probably enjoy carrying out plans and involving yourself in new and challenging experiences.

Your tendency may be to act on intuition and gut feel rather than careful analysis. When a thoughtful approach does not seem to be working out, you will be quick to discard it and improvise.

To increase your learning power, you need to place even more emphasis on the Reflective Observation (RO) and Abstract Conceptualization (AC) steps in the learning process. This means collecting and analyzing more information about the results of your efforts. Your batting average in the trial and error method of learning will increase if you learn more than you currently do from each of your trials.

When watching a role play, you may feel frustrated and prefer to be doing the plan yourself. Your tendency might be to think of how you would do the same activity. However, to develop your Reflective and Abstract skills, you should examine other, less personal aspects of the situation. Here are questions you might ask: What basic point does the exercise prove or disprove? What other information aside from your personal experience do you have that relates to the same topic? Does this exercise help you understand why certain techniques work (not just what the techniques are or how to use them)? To further increase your learning power try to take a less physically active part in the workshop than you might normally choose. Be more mentally active. Volunteer to be an observer in some exercises, not a doer. This will give you an opportunity to reflect on other people's experiences and learn from their trial and error.

You will find it useful to discuss workshop topics with someone who has an Assimilative learning style. This person will help you see information you might otherwise miss. They will also help you see the hidden logic and patterns in situations. You can often use this perspective to guide your intuition. You in turn can help them see new possibilities and opportunities to try out their ideas.

You may have a tendency to concentrate on the urgent aspects of a situation, favouring immediate utility over long-term understanding. To increase your learning, keep notes on your experiences, analyze them, and look for patterns. In other words, look for the forest as well as the trees. Take

more time to get other people's perspective on what has happened (or what you are about to do) during the workshop.

The particular skills you want to add are:

1. Organizing information
2. Building conceptual models
3. Testing theories and ideas

## Similarities and Preference Patterns in your Group

Group	Ways to include this group in training
Accommodative Style	
Convergent Style	
Divergent Style	
Assimilative Style	

## My Training Style

Look at what you plan to do in your 15-minute workshop. Have you chosen something that fits in well with your own learning style?

Here is a review of each style.

## The Converger (AC / AE)

- Practical application of ideas
- Good at closed-ended, "thing" problems
- Can focus on specific problems
- Can apply concepts
- Relatively unemotional (engineers/accountants)

## The Diverger (CE / RO)

- Imaginative ability
- Views concrete situations from many points of view
- Brainstormer
- People-oriented
- Emotional (personnel managers)

## The Assimilator (AC / RO)

- Creator of theoretical models
- Inductive reasoner
- Likes abstract concepts
- Can assimilate separate observations into an integrated
- Explanation (research and planning departments)

## The Accommodator (CE / AE)

- Doer
- Carries out plans and experiments
- Risk-taker
- Adapter
- Likes to go by the seat of the pants (marketing and sales)

## Individual Exercise

As I reflect on my most successful experience as a trainer, I remember...

What I like best about being a trainer is...

My favourite instructional technique is...

What I find most difficult about being a trainer is...

## About The Trainer Type Inventory

Each of us is influenced not just by our own learning style, but also by our training type.

As agents of change, most trainers are continually aware of changes in themselves. As you facilitate growth and development in others, you struggle to improve yourself, and to become a more effective leader, planner, presenter, and facilitator.

Once you have recognized that learners have preferences for the way they learn, you become more motivated to help them:

- Learn even better in their own preference, where they are comfortable.
- Become more willing to expand their comfort level.
- Try other new techniques and new behaviours to enhance their own learning. The Trainer Type Inventory

The Trainer Type Inventory (TTI) is designed to help you as a trainer identify your preferred training methods in order to:

- Identify the areas in which you have the greatest skill and expertise, so you can share this expertise with other trainers in this workshop.
- Identify the areas where you will want to increase your skills, thereby increasing your ability to address all aspects of the learning cycle.

- Change and growth can become more meaningful, more useful, and more exciting for everyone involved when we grow as trainers, right along with the people we are training.

Malcolm Knowles (1984) says that adults will learn “no matter what.” Learning is as natural as rest or play. With or without workbooks, visual aids, inspiring trainers or classrooms, adults will manage to learn. Trainers can however make a difference in what people learn and how well they learn. If adults (and, many believe, children as well) know when they are learning and if the reason fits their needs as they perceive them (the “So what?”) they will learn quickly and deeply.

There have been other attempts to categorize how trainers train. At first it was thought that trainers would prefer to train others in the style they preferred for learning. However, research has since discovered that there is very little significant relationship between a trainer’s own learning style and training–style preferences.

## Introduction to the TTI

The Trainer Type Inventory identifies four different training types: a Listener, a Director, an Interpreter, and a Coach. Generally we have a preference for one type or another, even though we need all four types to be a successful trainer.

The Training Type Inventory (TTI) has often been administered in conjunction with Kolb’s Learning Style Inventory. It has been used often enough to have some validity for trainers. It is not a psychological tool, but an exercise to help us recognize our own specific trainer development needs.

## Completing Trainer Type Inventory

There are twelve sets of four words or phrases listed below. Rank order the words or phrases in each set by assigning a 4 to the word or phrase that most closely applies to or reflects your personal training style, a 3 to the word or phrase that next best applies to your training style, a 2 to the one that next applies to your training style, and a 1 to the word or phrase that is least descriptive of your training style.

You may find it difficult to rank the items. Be assured that there is no right or wrong answers; the purpose of the inventory is to describe the style in which you train most often, not how effectively you train.

Question	Choices	Your Ranking
1.	a) Subgroups	
	b) Lectures	
	c) Readings	
	d) Lecture discussions	
2.	a) Showing	
	b) Perceiving	
	c) Helping	
	d) Hearing	
3.	a) Symbols	
	b) Actions	
	c) People	
	d) Instructions	

4.	a) Small group discussions	
	b) Free expression	
	c) Little participation	
	d) Time to think	
5.	a) Immediate personal feedback	
	b) Objective tests	
	c) Subjective tests	
	d) Personal evaluation	
6.	a) Expert	
	b) Scholar	
	c) Advisor	
	d) Friend	
7.	a) Theory	
	b) Practical skills	
	c) Application to real life	
	d) New ways of seeing things	
8.	a) Coach	
	b) Listener	
	c) Directory	
	d) Interpreter	
9.	a) Seeing "who"	
	b) Telling "how"	
	c) Finding "why"	
	d) Asking "what"	
10.	a) Processing	
	b) Generalizing	
	c) Doing	
	d) Publishing	
11.	a) Lead them to understand it	
	b) Leave them to do it	
	c) Let them enjoy it	
	d) Get them to think about it	

12.	a) It's yours	
	b) It's ours	
	c) It's mine	
	d) It's theirs	

### Scoring

Each word or phrase in each of the twelve sets on the TTI corresponds to one of four training styles, which will be described on the TTI Interpretation Sheet. To compute your scale scores for each type, transfer your numerical ranking for each item on the inventory to the appropriate space in the columns below. Then add up the numbers in each column and enter the totals in the spaces below the columns. The totals are your scores for the four training types.

TOTALS:	L	D	I	C
	1a:	1b:	1c:	1d:
	2b:	2a:	2b:	2c:
	3c:	3d:	3a:	3b:
	4b:	4c:	4d:	4a:
	5a:	5b:	5c:	5d:
	6d:	6a:	6b:	6c:
	7c:	7d:	7a:	7b:
	8b:	8c:	8d:	8a:
	9a:	9b:	9c:	9d:
	10d:	10a:	10b:	10c:
	11c:	11d:	11a:	11b:
	12b:	12c:	12d:	12a:

### Interpreting Trainer Type Inventory

Your lowest score is your least preferred training type, and offers you the greatest opportunity for growth and development. Your highest score is your most preferred type. One possible implication here, if this score is too high, is that you may be using your preferred style to excess. You may need to develop your skill in the other training styles in order to present information in ways that make sense to a greater range of participants.

The Trainer Type Inventory describes four training approaches: Listener, Director, Interpreter, or Coach. Each of the four training styles identified by the TTI is characterized by a certain training approach, way of presenting content, and relationship between the trainer and the trainees. The following are the primary characteristics of the trainer for each of the four training types.

Listener (L)	Director (D)
<ul style="list-style-type: none"> <li>Creates an effective learning environment</li> <li>Trains the Concrete Experiencer most effectively</li> <li>Encourages learners to express</li> </ul>	<ul style="list-style-type: none"> <li>Creates a perceptual learning environment</li> <li>Trains the Reflective Observer most effectively</li> <li>Takes charge</li> </ul>

<ul style="list-style-type: none"> <li>personal needs freely</li> <li>Assures that everyone is heard</li> <li>Shows awareness of individual group members</li> <li>Reads nonverbal behaviour</li> <li>Prefers that trainees talk more than the trainer</li> <li>Wants learners to be self-directed and autonomous</li> <li>Exposes own emotions and experiences</li> <li>Shows empathy</li> <li>Feels comfortable with all types of expression (words, gestures, hugs, music, art etc.)</li> <li>Does not seem to worry about the training</li> <li>Stays in the here-and-now</li> <li>Is practical (goes with the flow)</li> <li>Appears relaxed and unhurried</li> </ul>	<ul style="list-style-type: none"> <li>Gives directions</li> <li>Prepares notes and outlines</li> <li>Appears self-confident</li> <li>Is well organized</li> <li>Evaluates with objective criteria</li> <li>Is the final judge of what is learned</li> <li>Uses lectures</li> <li>Is conscientious (sticks to the announced agenda)</li> <li>Concentrates on a single item at a time</li> <li>Tells participants what to do</li> <li>Is conscious of time</li> <li>Develops contingency plans</li> <li>Provides examples</li> <li>Limits and controls participation</li> </ul>
<p>Interpreter (I)</p>	<p>Coach (C)</p>
<ul style="list-style-type: none"> <li>Creates a symbolic leaning environment</li> <li>Trains the Abstract Conceptualiser most effectively</li> <li>Encourages learners to memorize and master terms and rules</li> <li>Makes connections (ties past to the present, is concerned with the flow of the training design)</li> <li>Integrates theories and events</li> <li>Shares ideas but not feelings</li> <li>Acknowledges others' interpretations as well as own</li> <li>Uses theory as a foundation</li> <li>Encourages generalizations</li> <li>Presents well-constructed interpretations</li> <li>Listens for thoughts; often overlooks emotions</li> <li>Wants trainees to have a thorough understanding of facts, terminology</li> <li>Uses case studies, lectures, readings</li> <li>Encourages learners to think independently</li> <li>Provides information based on objective data</li> </ul>	<ul style="list-style-type: none"> <li>Creates a behavioural learning environment</li> <li>Trains the Active Experimenter most effectively</li> <li>Allows learners to evaluate their own progress</li> <li>Involves trainees in activities, discussions</li> <li>Encourages experimentation with practical applications</li> <li>Puts trainees in touch with one another</li> <li>Draws on the strengths of the group</li> <li>Uses trainees as resources</li> <li>Helps trainees to verbalize what they already know</li> <li>Acts as facilitator to make the experience more comfortable and meaningful</li> <li>Is clearly in charge</li> <li>Uses activities, projects and problems based on real life</li> <li>Encourages active participation</li> </ul>

Each type also trains in a different way.



- The Listener trains the Concrete Experienter most effectively, and is very comfortable in the activity and publishing steps of the Experiential Learning Cycle.
- The Director obtains the best results from the Reflective Observer, and is usually very comfortable during Step 3, which is processing (particularly in helping trainees make the transition from “How do I feel about this?” to “Now what?”).
- The Interpreter trains in the style favoured by the Abstract Conceptualiser (Step 4, generalizing).
- The Coach trains in the style favoured by the Active Experimenter (Step 5, applying)

These relationships are indicated in the table below.

	L Listener	D Director	I Interpreter	C Coach
Learning Environment	Affective	Perceptual	Symbolic	Behavioural
Dominant Learning Style	Concrete Experienter	Reflective Observer	Abstract conceptualiser	Active Experimenter
Means of evaluation	Immediate personal feedback	Discipline based; External criteria	Objective criteria	Learner's own judgment
Means of Learning	Free expression of personal needs	New ways of seeing things	Memorization; knowing terms and rules	Discussion with peers
Instructional Techniques	Real-life applications	Lectures	Case studies, theory, reading	Activities, homework, problems
Contact with Learners	Self-directed Autonomous	Little participation	Opportunity to think alone	Active participation
Focus	"Here and now"	"How and why"	"There/then"	"What/How"
Transfer of Learning	People	Images	Symbols	Actions
Sensory Perception	Touching	Seeing and hearing	Perceiving	Motor Skills

## 6.5.2 Presenting Information

### Coaching

In most technical training situations, the objective is to train the trainees to use a particular software program or computer system. This typically involves hands-on practise. The trainer can be more effective in these situations if he/she acts like a “coach” rather than a “trainer” in the traditional sense.

Following are some tips:

#### 1. Think like a coach

Be committed to everyone’s success; don’t think about “bell curves”. You are a successful trainer only if the trainees have a successful experience.

#### 2. Prepare the trainees

Let them know the “rules of the game”. Tell them what they will be doing and point out the “pitfalls” – ahead of time.

### 3. Focus on the basics

Reinforce basic skills such as reading the screen, knowing the keyboard and using the mouse, understanding the general concepts and context

### 4. Don't give away answers

Make trainees think. Forward the action by asking "show me what you did". Try taking different approaches. Let them experience the solution.

### 5. Don't press the keys!

Never press the keys. This is one of the biggest sins a trainer can commit. Let them do the driving, except when it distracts from the training

### 6. Reinforce strengths and build on success

Point out to the things that they already know and what is being done correctly, than encourage and help them move the ball down the field.

## Interactive Lecturing

Interactive lecturing is the use of questioning, discussion and lecturing to stimulate understanding, direct discussions, and provide information. Its purpose is to change the roles of both trainer and the trainee from passive to active.

Following are some tips:

#### 1. Have a plan

Have a plan or information flow in mind is, of course the most important first step. This serves as a "road map" to help keep the trainer focused. This plan also has the information divided into manageable units.

#### 2. Use your eyes

Look at the trainees. Use eye contact to create involvement. Check understanding and "control" the room

#### 3. Use your voice

Speak clearly and strongly. Don't use "filler" language. It indicates that you are not sure what you are talking about. Use inflection in the voice to keep interest and emphasise key pieces of information. Remember to breathe.

#### 4. Use your presence

Move around the room. Use the back as well as the sides and front. Use your presence to promote involvement and discouraged distractions

#### 5. Use questioning

Questions are the most important tool. They are used to stimulate the trainees thinking and involvement in the content, moving them from passive to an active role.

#### 6. Build on what they already know

Use analogies, metaphors, stories, graphics and "real world" examples to illustrate both verbally and visually the information you are providing.

#### 7. Set a context

Make sure that you present the “big picture” and point out where the trainees are focused at the moment. Also be sure to let them know what is coming.

## 8. Stay conscious

Read the trainees’ body language. Make eye contact, breathe; move around. Use variety and humour. Keep to the timing. Don’t get off track. Keep in mind whose needs are being met.

### 6.5.3 Using Your Body Effectively

Effective communication involves more than talking to your audience. Your body language plays an important role in communication. Research shows that what you say accounts for only 7% of the effectiveness of a presentation, while 93% are based on non-verbal communication. Body language, proximity, and eye contact are three main areas of focus in non-verbal communication. Remember it’s not what you say, but how you say it that often matters the most in communication.

Some areas to consider while presenting include:

#### 1. Facial expressions

Smiling is a powerful cue that transmits friendliness, warmth, and approachability. Smiling is often contagious and others will react favourably. They will be more comfortable around you and more open to the information you are offering.

#### 2. Posture

You communicate numerous messages by the way you hold yourself while presenting. A person who is slouching or leaning with arms across their chest may be perceived as being uninterested or unapproachable. Standing erect, facing the audience with an open stance, and leaning forward communicates that you are receptive and friendly. Speaking with your back turned or looking at the floor or ceiling should be avoided as it communicates disinterest.

#### 3. Gestures

A lively speaking style captures attention, makes the material more interesting, and facilitates understanding. Use natural movements to emphasise topics and free, easy arm and hand movements to add personality to your presentation. If you fail to gesture while speaking, you may be perceived as boring and stiff. Gesturing too often can also be distracting for some learners.

#### 4. Movement

Moving naturally around the classroom increases interaction, adds interest, and draws attention to the presentation. Staying frozen in the front of the room can be distracting and boring for people to watch. Shuffling feet and pacing can convey nervousness and lack of confidence.

#### 5. Proximity

Cultural norms dictate a comfortable distance for interaction with others. When interacting with adults in the classroom, a presenter needs to be aware of people’s defined levels of personal space. Signals of discomfort caused by invading other’s space may include rocking, leg swinging, tapping, and gaze aversion. Do not invade a student’s intimate space. Most adults will feel uncomfortable, even if rapport has been established.

## 6.5.4 Building Rapport with Eye Contact

Steady eye contact helps to regulate the flow of communication, encourages participation, and can be used to develop rapport with the audience. When students feel that you see them as individuals, they are more likely to trust you as a trainer and be more open to the learning experience.

Some tips for using eye contact to build rapport include:

### 1. Length of eye contact

Try to maintain eye contact with one person at a time for at least 3 – 5 seconds or until you complete a thought. This helps to establish a connection with people and helps you to avoid darting eyes, which can be distracting and communicate nervousness.

### 2. Movement of eyes

Try to establish direct eye contact towards different parts of the audience throughout the course of your presentation. Staring too long in one direction may cause you to miss important information and can make certain audience members feel less important.

### 3. Search for friendly eyes

If you are nervous, look for a friendly trainee and establish eye contact with that trainee. Gradually, work to establish eye contact with everyone.

Some habits to avoid include:

### 1. Talking to the ceiling

Don't lecture to a spot over the top of the trainee's heads. They may think you don't care or they may feel that you are "above them." Adults learn better with colleagues.

### 2. Talking to the board

Don't talk to your desk, to the whiteboard, or to your visuals. Trainees may not be able to hear you and may become disinterested.

### 3. Clutching your training manual

Be familiar with your training material. Being tied to your notes or a manual keeps you from establishing eye contact and may cause trainees to question your knowledge, preparedness, and confidence.

## 6.5.5 Enhancing Voice Quality

Voice is another area of communication that can affect the quality of learning in a classroom. An interesting and audible voice will engage trainees, while a soft or monotone voice can cause boredom or disinterest among trainees. While it may be difficult to listen to and change our own voice, with awareness and practice, it is possible to use one's voice effectively. The first step to refining your voice is to understand the components of voice and identify common voice problems. Once identified, most voice problems can be improved by being aware of the problem, altering some habits, and practicing new behaviours on a regular basis.

### 1. Pace

How long a sound lasts. Talking too fast causes words and syllables to be short, while talking slowly may lengthens them. Varying pace helps to maintain the audience's interest.

Suggestions for improvement:

- Be aware of your normal conversational pace and keep in mind how tension affects the speed in which you talk.
- Use breathing and natural pauses to slow down your pace
- Constantly vary your pace in order to maintain audience interest.

## 2. Projection

The direction of the voice so that it can be plainly heard at a distance is considered effective. Problems with projection are often the result of tension and breathing from your throat.

Suggestions for improvement:

- Avoid projecting from your throat which can lead to sore throats, coughing, and loss of your voice.
- Take slow, deep breaths, initiated from your abdomen
- Open your mouth fully and speak to the people in the back of the room.

## 3. Articulation

The ability to pronounce words distinctly. It often reflects our attitude towards the words we are speaking. Clear enunciation reflects self-confidence and interest, while slurred or mumbled speech indicates insecurity or indifference.

Suggestions for improvement:

- Speak at a slower pace than your normal conversational tone.
- Take the time to pronounce each letter or sound within a word.
- Listen for common articulation problems, such as dropping the “g” at the end of words such as finding or going.

## 4. Pitch

Pitch describes the normal range of the voice – its highness or lowness. Everyone is capable of a wide voice range. Stress and poor breathing can greatly alter the pitch of your voice.

Suggestions for improvements:

- Adjust pitch to convey different meanings throughout a presentation.
- To alter pitch, control your breathing; breathe from your abdomen and slow your rate of speech.
- Take pauses to relax between pitch changes

## 5. Inflection

Inflection refers to the manner in which pitch varies as we speak. Inflection serves as verbal punctuation and involves changing pitch to convey meaning. Upward inflections ask a question, suggest uncertainty or doubt, and communicate hesitancy. Downward inflections give information and convey strength and authority to the audience.

Suggestions for improvement:

- Use upward and downward inflections appropriately.
- Avoid constant middle inflection where the voice neither rises nor falls but just drones on and on.

## Module 6.5.6 Questioning Techniques

Questioning is the power tool to use in training. It has many uses, from testing trainees on their knowledge of the subject matter, to get information to helping a trainer maintaining classroom control. Trainers often state concept when the class could be actively involve if more questioning were used.

### Types of Questions

#### 1. Whole group

This type of question is directed to the entire group.

#### 2. Individual

This type of question is directed to a trainee. You should use this questioning method carefully. You can start by asking a whole-group question. Then, and only after evaluating the group and identifying a trainee who will clearly be able to answer, redirect the question to particular trainee.

#### 3. Pass

This technique is used to direct a question asked by a trainee, to the group. It can also be used get a trainee “off the hook” if he or she is unable to answer an individual question.

#### 4. Reword and ask again

This technique can be used when you have a poorly worded question and you need to restate for better understanding, or when you’ve receive an answer that is “close” but not quite correct.

#### 5. Rhetorical

A rhetorical question is usually asked solely for thought-provoking purposes. An answer is not expected.

#### 6. Testing Questions

A testing question is asked by a trainer to test knowledge, something that a trainee already knows or can be reasonably expected to know. It is also used to:

## Handling Responses to Question

How you handle responses from trainees can be equated with doctors “bedside manner.” The ways in which question are addressed can either encourage interaction or end it for the rest of the day.

Giving trainees nine second to respond may seem long and at first quite uncomfortable. However, it takes the average adult about three second to process the questions; another three second to see if someone else will answer the question for them, and an additional three seconds to find the courage to respond.

- Accept at any time, but take one at a time
- Deal with those which are relevant now and others later
- Indicate degree of correctness
- Build on trainee's words
- If you do not know the answer - let them know; note questions and find the answer

- Do not bluff; you will be caught out
- Tell the group as well as the individual

## Level of Questioning

### 1. Low level

Low-level questions are the most commonly used questions in a classroom (50%-90%). These questions are highly convergent, and they typically check for concrete knowledge learned. These questions often start with words like, what, when, where, and who. They work well early in the day because they are safe questions with clear right and wrong answers.

### 2. High level

High level questions involve some type of personal value judgement on the part of person answers. High-level questions tend to promote divergent thought. They typically start with words like who and why. Typical, a low-level understanding of situation is needed to give an answer to the high-level questions.

## Questions

1. List and briefly describe the four learning styles.
2. List and briefly describe the four different training types.
3. Discuss coaching and interactive lecturing as techniques to present information
4. What are the areas you should consider when presenting information
5. List some tips for using eye contact to build rapport.
6. List and briefly describe the components of voice.
7. Why is questioning important?
8. How should one handle responses to questions?

## Exercise

*Design a programme for (a) business people; (b) trainers; and (c) graduates in a group. The outcomes should be presented by a group.*

## Assignments and Answers

### TASK

It is required that you design a national roll **plan**. The content of the plan should include:

- strategies and ideas on how to achieve this plan
- how you intend to get your participants
- qualifying participants assessment criteria
- duration of the program
- cost of training or participation fee
- number of trainers needed and their cost
- number of modules to be included in your training
- any sponsorship opportunities
- how you intend to sustain further trainings

Discuss the Case study based on the core questions discussed under FLOSS training business opportunities.

**Rules:** Please state (**3 maximum**) points briefly how you would have approached the same training opportunities and any two training opportunities you would like to explore as a group of trainers.

### Some examples from participants

#### 1 Objectives and vision statement

The basic objectives of the national roll-out training are:

- To raise FOSS awareness in the Tanzanian Community
- To develop sustainable FOSS-based IT business
- To strengthen FOSS communities in Tanzania

The vision is to build capacities in African small and medium IT enterprises to make FOSS based business. It aims to encourage the growth of African IT industries.

#### 2 Participants

As the objective of the training is focusing on FOSS business models, the training will call for participants from IT companies wishing to diversify their business, start-up IT entrepreneurs, local FOSS communities, educators and graduates in IT related subjects as well as other participants interested in FOSS business models in Tanzania.

A call for participants will therefore be advertised through different marketing strategies. Different media through which this course can get very good publicity in Tanzania, are: the newspapers, e-mail to target groups and other prospective IT companies. Other strategies will be development of promotional materials such as posters and place them in high traffic areas.

The Training will be delivered in a Workshop style to allow maximum interaction and discussions. The target is to train 20 participants each quarter (three months) and therefore about 80 participants per year. Initial trainings will be concentrated in regional towns and cities where IT infrastructure is well established

It is expected that all participants will be selected from those who have at least knowledge of basic computers, experience in FOSS or potential FOSS collaborator to allow uniform workshop interactions.

#### 3. Output

The target is to achieve the set objectives; so we can expect the Training outcome to be:

(a) Awareness on FOSS causes more people to demand for FOSS applications and solutions and as such provide opportunities for any FOSS businesses to flourish

(b) Growth of a FOSS Community, which comes with it, more FOSS minds, students, trainers, and advocacy and so on.



(c)With these and more benefits, it is possible to plan an annual FOSS event, such as FOSS Clinics, Free FOSS Training, FOSS certification and so on.

#### **4 The Training Content**

The training shall consider the local conditions and environment. It will comprise three modules, namely Module 1, Module 2 and any one of the other modules as listed below:

- Module 1: Introduction to emerging FOSS business models
- Module 2: African business models: Case studies
- Module 3: Communicating FOSS
- Module 4: Introduction to General business skills
- Module 5: FOSS specific business knowledge and skills
- Module 6: FOSS Training
- Module 7: E-learning Platform

The selection of the modules will depend on the mission of the target groups and their levels of understanding. The content materials will be availed to the participants at least one week before the workshop.

#### **5 Resource persons (Trainers)**

As a FOSS ToT member I will be the principal trainer. Supporting trainers will be sourced from within FOSS related institutions and FOSS - ToT Alumni. Shortfall of trainers will be requested from InWent and FOSSFA. Qualified trainers will need to have knowledge of FOSS, proven training Experience and proven excellence in their field of profession

#### **6 Time Schedules and Venues**

A workshop session will be done for a period of 5 days (not less than 40 hours). This time is just long enough for participants to understand the materials content and practices of the FOSS modules without being bored.

Information on the workshop venue, schedules for starting and end times and dates for the workshop sessions will be set and communicated to participants at least four weeks in advance. Arrangements for hotel accommodation will be arranged for participants in need. The workshop organization will establish a support through help desk for post training questions, accommodations reservations, training registrations etc.

#### **7 Fees and Costs**

Participants shall contribute an TSH. xxx for the workshop. Trainers would be paid TSH xxx per day.

#### **8 Sponsorship & Marketing**

InWent and FOSSFA have promised funding and support, It is possible to look for Local Support for this Training workshop, especially from Companies and institutions that will likely benefit from adding their name and profile to such an event. So a workshop prospectus together with a call for support and sponsorship would go a long way in acquiring some support. This needs to be done in time.

#### **9 Media**

Media Coverage is crucial for such a workshop and this would help to inform a larger group of people about the Workshop. A Newspaper article, a phone in Radio announcement, a community announcement could all add to the buzz.

#### **10 Course ware evaluation**

Evaluation forms for the course ware and trainers will be prepared and availed to the participants after every module. At closing of the workshop there will be general discussion on the evaluation results and process to ways for improvement. This will also give opportunity to discuss issues that are of interest or were omitted for future improvements.

## 11 Budget

#	Activity	No	Rate/day	Tsh/day	TOTAL / 5 days
1	INCOME				
1.1	Participation fee	20			
<b>1.2</b>	<b>Total Income</b>				
2	EXPENDITURE				
2.1	Venue with computers	1			
2.2	Refreshments	23			
2.3	Lunch	23			
2.4	Transport for ppts	20			
2.5	Stationary	20			
<b>2.6</b>	<b>Trainers fees</b>	3			
<b>2.7</b>	<b>Advertising and marketing</b>	1			
<b>2.7</b>	<b>Total Expenditure</b>				
	Contingencies / accidentals 10%				
<b>2.8</b>	<b>TOTAL</b>				

Aflent's national roll out plan will focus on providing training initially to university students, BEE entrepreneurs and other established black businesses in South Africa. The aim is to empower these groups with FLOSS for two major reasons:

- Impart skills to use FLOSS applications to enable and capacitate internal business processes in order to gain competitive advantage
- To train the groups on how to move into FLOSS-based businesses (FLOSS consultancy and training)

## Strategies

The key to achieving successful trainings lie in the ability to attract attention of participants, offering a highly accredited and internationally recognised African FOSS Business Model course establish and maintain continuous online learning and networking platform for trainees. The trainings will take the form of a strategy-driven process.

- Conduct a preliminary FLOSS workshop to market the concept and the training.
- Pitch for short course raining deals with local institutions and universities.
- Clear the issue of certification and accreditation of the course.
- Develop a solid sustainability model.

## Getting participants

Participants will be sourced from the corporate industry, universities, NGOs and the public sector including technologists in government departments.

- Marketing the FOSS concept
- Marketing the FOSS training
- Networking with colleagues, former workmates and clients interested in Open

## Participants' assessment criteria

(d)Attitude

(e)Eagerness to learn

(f)Reasons why participants want to get the training

(g)Skills

- A qualification in IT and/ or business
- Training skills
- Previous advocacy work
- Knowledge
- Basic understanding of FOSS and/or IT's role in business

## **Duration of the program**

2 weeks for 2 months

## **Cost of training or participation fee**

## **Trainers needed and their cost**

As a certified trainer I will choose a number of modules 2 and 4. The remainder of the modules will be delivered by local and regional trainers subject to their availability. In total four trainers are required for the course. Cost of the trainers will be determined by FOSSFA and InWent.

Estimated rate per trainer per module will be obtained from the FOSSFA/InWent.

## **Modules to be included in your training**

Provisionally all modules are to be included:

1. Introduction to emerging FLOSS Business Models
2. African Business Models Case Studies
3. Communicating FLOSS
4. Business Skills
5. FLOSS Business Knowledge and Skills
6. FLOSS Training Business

## **Sponsorship**

- Established FLOSS companies (Sun Microsystems)
- First National Bank
- IT companies
- Government departments (DST, SITA, Local Councils)

## **Sustainability Model**

The training will be offered as a short course through The Business Place and Monash and North West University.

## **TEST Module 6**

**1. Below are some of the winning combinations of an "ideal" FLOSS trainer. Which one is not? Ability to engage participants and relate content to their situation.**

- (a) Winning personality and ability to communicate.
- (b) Practical experience in FLOSS applications.
- (c) Ability to program in Java and Visual Basics
- (d)

**2. Which one of the following is not one of the three types of training interventions for FLOSS Trainers discussed in module 6.1?**

- (a) Those who have the technical knowledge of FLOSS packages and have been using certain packages, but have not conducted any training of any nature.
- (b) Those who have the knowledge and skills on how to conduct ICT training for adults which they might have acquired through self-learning or having had attended a course, but have not conducted any FLOSS training. Instead, they have conducted training in proprietary software.
- (c) Those who have no jobs and they want to occupy themselves
- (d) Those who have conducted FLOSS training courses and have the knowledge and skill on how to conduct training, but have not trained other trainers

**3. Why is it important that trainers use the software they will be training?**

- (a) Helps them become conversant with features and functionalities that the software provides and can transmit this knowledge to their trainees.
- (b) Helps them boast of the knowledge they have about the software
- (c) Helps them deliver the training within the shortest time possible
- (d) Helps them be liked by the trainees

**4. Trainers should see training as a stage production: which of the following is not part of the stage production aspects?**

- (a) There is the audience (participants).
- (b) There is a stage (training room).
- (c) The performance by the actor (trainer conducting the course).
- (d) The performance by the audience (Shouting)

5. Selection of candidates for FLOSS training can be done using the following criteria except selection of candidates for FLOSS training can be done using the following criteria except.....

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6. Below are some of FLOSS certification recognisable in many countries. Which one is not very recognizable when it comes to FLOSS training?

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7. Below is a list of some of the steps involved in the design of a course/curriculum. Which one is weak compared to the others in the list?

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8. Why should the development of FLOSS training content take cognisance of the commercial world for proprietary software?

9. The Diverger is described by the following except:

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10. The Converger is described by the following except:

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## Module 6 Authors and Trainers

### Pool of African ict@innovation expert trainers

	Name Module	Name
Module 6	FLOSS Training	Arnold Pietersen, Celso Timana, Paschalia Ouma, Shirley Akasreku, Frederick Yeboah, Kofi Kwarko

### Main contributors

Module 6	Sulayman K. Sowe ( <b>Facilitator</b> ), Arnold Pietersen, Glenn McKnight, Paschalia Ndungwa Ouma, Derek Lakudzala
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## Partners

### Implementing Partners



#### FOSSFA - The Free Software and Open Source Foundation for Africa (FOSSFA)

FOSSFA partners with InWEnt to implement the ict@innovation programme. FOSSFA is the premier African FOSS organization. The vision of FOSSFA is to promote the use of FOSS and the FOSS model in African development, and the organization supports the integration of FOSS in national policies. FOSSFA also coordinates, promotes, and adds value to African FOSS initiatives, creativity, industry, expertise, efforts and activities at all levels.

<http://www.fossfa.net>

To become a FOSSFA member, please fill the [FOSSFA Membership Application](#) .

Please also check the page on [acknowledgements](#) to some of the contributors, who are heavily investing in [ict@innovation](#).



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und Entwicklung gÜmbH Capacity Building  
International, Germany

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InWEnt's it@inwent programmes strengthen IT sectors in Africa and Asia, fosters key innovations in Information and Communication Technologies (ICTs) for economic development, and support its partners to use ICTs as enabling tools for poverty reduction. <http://www.it-inwent.org>

## Funding / Strategic Partners



Federal Ministry  
for Economic Cooperation  
and Development

### German Federal Ministry for Economic Cooperation and Development (BMZ)

The BMZ is the main funder of ict@innovation and shareholder of InWEnt, representing the Federal Republic of Germany. More information is online here: <http://www.bmz.de/en/>

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Open Society Initiative  
for Southern Africa

## Open Society Initiative for Southern Africa (OSISA)

OSISA supports ict@innovation on a strategic level. The Open Society Initiative for Southern Africa (OSISA) is a leading Johannesburg-based foundation established in 1997, working in ten Southern Africa countries: Angola, Botswana, DRC, Lesotho, Malawi, Mozambique, Namibia, Swaziland, Zambia and Zimbabwe. As a foundation, OSISA provides African leadership in the definition and development, within the specificities of Southern African realities, of the concept and ideals of an open society.

<http://www.osisa.org>

## Training Partners



UNITED NATIONS  
UNIVERSITY

## UNU-MERIT UNU-MERIT

UNU-MERIT is a joint research and training centre of United Nations University (UNU) and Maastricht University, The Netherlands. As the United Nations University's Maastricht Economic and social Research and Training Center on Innovation and Technology, UNU-MERIT provides insights into the social, political and economic factors that drive technological change and innovation. The Centre's research and training programmes address a broad range of policy questions relating to the national and international governance of science, technology and innovation, with a particular focus on the creation, diffusion and access to knowledge.

Within UNU-MERIT, the Collaborative Creativity Group (CCG) investigates the socio-economic aspects of collaboration across all domains. It examines the mechanisms that enable people and companies to innovate together, and helps policymakers to create a positive environment for creativity and innovation, promoting economic growth and social welfare.

<http://www.merit.unu.edu/>

<http://ccg.merit.unu.edu>



## AITI-KACE

The Ghana-India Kofi Annan Centre of Excellence in ICT (AITI-KACE), Ghana's first Advanced Information Technology Institute works to stimulate the growth of the ICT Sector in ECOWAS. Established in 2003, through a partnership between the Government of Ghana and the Government of India, this state-of-the-art facility provides a dynamic environment for innovation, teaching and learning as well as practical research on the application of ICT4D in Africa.

<http://www.aiti-kace.com.gh>

## Introducing ict@innovation – Creating Business and Learning Opportunities with Free and Open Source Software

### What is Free and Open Source Software?

Free and Open Source Software (FOSS) is software which can be freely used, modified and distributed. FOSS offers a number of different opportunities. Developers are able to customize, change or add to open source software and join in global open production processes. This can help stimulate local innovation and growth in the IT sector. With FOSS, small and medium-sized IT businesses can create locally adapted IT solutions, independent of foreign software vendors. FOSS allows local value chains to be tapped, instead of forcing customers to rely on foreign software vendors.

Free and Open Source Software technologies are used all over the world. FOSS is often the technology of choice to run servers, networks, or content management systems, but also operating systems such as Linux, or business and office applications such as OpenOffice. As FOSS is adaptable and does not entail license fees, it is particularly useful when applications need to be adapted to a specific context.

The use of FOSS is spreading – governments and businesses are increasingly employing FOSS. This means that the business market around FOSS solutions is growing. Local businesses, in particular IT-SME can benefit from FOSS as users, but more importantly they can generate business models around FOSS such as offering high-value IT services, software development, training and qualification.

### Free and Open Source Software creates business opportunities!

FOSS technologies offer opportunities particularly for small and medium sized IT enterprises to provide IT services for local IT markets.

What do small and medium-sized enterprises (SME) in Southern and East Africa need to work with FOSS? Many IT-SME are not yet aware of how they can use FOSS in their business models – knowledge sharing and training is needed to qualify employees. In addition, trust in FOSS needs to be improved, for instance by spreading quality standards. ict@innovation addresses these topics by:

- Sharing knowledge on African Business Models and Skills in FOSS
- Building trust and business through FOSS Certification
- Developing innovative local FOSS Applications

ict@innovation is an international capacity building programme, implemented in partnership by **FOSSFA** - The Free Software and Open Source Foundation for Africa and **InWent** - Capacity Building International, Germany.

The **ict@innovation** programme offers **advanced training courses** for training institutions and trainers on:

- business models and business development for IT SME – how to integrate FOSS services in your training portfolio
- how to get certified in basic FOSS technical skills

**Main objective of ict@innovation** is to foster small and medium-sized enterprises (SME) in the field of Free and Open Source Software in Southern and East Africa. Through advanced training and networking in FOSS skills, the programme contributes to qualify African IT SME in providing localized and adapted FOSS applications and services to public administration and private sector.

The programme focuses on Free and Open Source Software (FOSS) as a key technology to drive innovation, add local value and create sustainable and affordable ICT-solutions.

<b>Region of Implementation</b>	Southern and East Africa, particularly Ethiopia, Kenya, Malawi, Mozambique, Namibia, Rwanda, South Africa, Tanzania, Uganda, and Zambia
<b>Duration</b>	2008 – 2010 (first phase)
<b>Main Funding Partners</b>	German Federal Ministry for Economic Cooperation and Development (BMZ) & the Open Society Initiative for Southern Africa (OSISA)
<b>Website</b>	<a href="http://www.ict-innovation.fossfa.net">www.ict-innovation.fossfa.net</a>



[www.ict-innovation.fossfa.net](http://www.ict-innovation.fossfa.net)

## Site Features:

**Profiles** – Create your own profile, advertise your FOSS skills and share your interests in FOSS and the ict@innovation programme

**Forums and Wiki** – Read and contribute to discussions and work processes by engaging in online discussions in the forum and collaborative text editing using the wikis

**Blogs** – read and discuss about current news and developments on FOSS related topics and the ict@innovation programme in the blogs

**Groups** – Join in online organizational activities by engaging in topic specific groups

## Online Community Membership

*Do you have a FOSS project or initiative you wish to interest others in?*  
*Do you want to contribute to the ict@innovation programme in a specific way?*

The ict@innovation portal offers functions for those of you, who want to engage more actively in the community or programme – The blog is open for all community members to share relevant news and views. Also, all community members can create groups to share files, manage events, and engage in private discussions on relevant topics. The different training programmes will later on all have their own group to collaborate online.

All services of this site are free of charge.

[www.ict-innovation.fossfa.net](http://www.ict-innovation.fossfa.net)

The web portal is designed to keep its members in touch with current developments of the ict@innovation programme and other FOSS projects in Africa. It is also designed to host a community of persons interested in or working in the area of FOSS in Africa and to enable participatory management of the ict@innovation programme. We invite you to become a community member!

## Joining the ict@innovation Web Community

**The Benefits:** Why join? This website offers you the opportunity to get to know a range of persons working in related areas, as well as to advertise your skills and interests, to share and learn from other experts using the range of tools that enable active knowledge exchange for community members.

**Becoming a Member:** You can become a member of this community by registering on the site and creating a profile, indicating your interests and skills in FOSS. This will enable you to contribute to the website fora and wikis, to join in knowledge exchange with other persons interested in FOSS and/ or involved in the ict@innovation programme.

**Staying Informed:** Receive all blog posts and other website updates by email or RSS feed! In order for everyone to stay in touch with the programme and community activities, we offer an email-subscription and RSS feed service on all website services and news items (including blog posts, events, forum messages etc.). You find RSS icons to subscribe to feeds at the bottom of the sections that offer subscriptions. You can manage email subscriptions as a registered user under "My account" > "Subscriptions".

Sign up on ict@innovation to join the community and stay updated: <http://www.ict-innovation.fossfa.net/>

## FOSSFA – The Free Software and Open Source Foundation for Africa

FOSSFA is the premier African FOSS organisation, and was founded under the auspices of the Bamako Bureau of the African Information Society Initiative within the mandate given by African Governments in 1995 to the United Nations Economic Commission for Africa (UNECA). The Vision of FOSSFA is to promote the use of FOSS and the FOSS model in African development, and the organization supports the integration of FOSS in national policies. FOSSFA also coordinates, promotes, and adds value to African FOSS initiatives, creativity, industry, expertise, efforts and activities at all levels. FOSSFA partners with development organizations who share these goals towards a participatory and gender-mainstreamed sustainable development and the attainment of the Millennium Development Goals in Africa. FOSSFA is governed by a Council elected during Idlelo, from which the Executive is chosen. FOSSFA members may be individuals, organizations, development agencies or government FOSS bureaus. The former South African Minister of Public Service and Administration, Ms Geraldine Fraser-Moleketi is a FOSSFA present Patron. <http://fossfa.net/>

### InWEnt – Qualified to Shape the Future

InWEnt – Capacity Building International, Germany, is a non-profit organisation with worldwide operations dedicated to human resource development, advanced training, and dialogue.

Our capacity building programmes are directed at experts and executives from politics, administration, the business community, and civil society. We are commissioned by the German federal government to assist with the implementation of the Millennium Development Goals of the United Nations. In addition, we provide the German business sector with support for public private partnership projects. Through exchange programmes, InWEnt also offers young people from Germany the opportunity to gain professional experience abroad. <http://www.inwent.org>

Through its it@inwent programmes, InWEnt strengthens IT sectors in Africa and Asia, fosters key innovations in Information and Communication Technologies (ICTs) for economic development, and supports its partners to use ICTs as enabling tools for poverty reduction. <http://www.it-inwent.org>

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**Cover page:** Map of Africa with percent of population per country that downloaded the new version of the Open Source Browser Firefox in June 2008. Colours = downloads.

Source and credits: David Eaves, see <http://eaves.ca/2008/06/22/the-firefox-download-map-remixed/>

## Content Creation Community or 3C

### Available at:

<http://www.ict-innovation.fossfa.net/wiki/public-wiki/african-foss-business/training-material-content-creation>

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## Additional Material

Additional material for all modules is available at the ict@innovation download page at: <http://www.ict-innovation.fossfa.net/node/4252>

<b>Module 6:FOSS TRAINING</b> Part of: ict@innovation: Free your IT-Business in Africa! Advanced Training Material on African "Free and Open Source Software" (FOSS) Business Models for IT-SMEs	
<b>Handbook &amp; Trainers Manual</b> <ul style="list-style-type: none"> <li>• How to be a FOSS Trainer</li> <li>• FOSS Training as a Business</li> <li>• Organising Trainings</li> <li>• Open Educational Resources and Open Content</li> <li>• Communication Skills</li> </ul> (Introduction, Overall Learning Objectives, Sessions and Timetable, Delivery method, Duration, Background Information on main content, including facilitation tools such as assignments, exercises, lead questions for discussions, assessments)	<a href="#">Download_Handbook_Module 6.pdf</a> <a href="#">Download_Handbook_Module 6.odt</a>
<b>Model Presentations for Trainers / Facilitators</b> (Slide show material for main contents of Module 6)	Download <a href="#">Module 6_Presentations.zip (2,595kb)</a>
<b>Final Test for Assessment of learning outcomes</b> (Online-Test - includes all modules)	Download <a href="#">Tests_Modules.pdf</a> <a href="#">Tests_Modules.odt</a> Link to <a href="#">online-version</a> of test
<b>Evaluation forms</b> (Full set of evaluation form to assess training for module 6)	<a href="#">Download_evaluationM6.pdf</a> <a href="#">M6_Eval_odt</a>
<b>Pool of African ict@innovation expert trainers</b> (Contact to Africa-based trainers and experts, who have training experience with the course)	<a href="http://www.ict-innovation.fossfa.net/wiki/public-wiki/course-advanced-african-foss-business-models/FBMTrainers">http://www.ict-innovation.fossfa.net/wiki/public-wiki/course-advanced-african-foss-business-models/FBMTrainers</a>
<b>Derived training material:</b> (for more information on how you can contribute to improve the training material, and how to correctly acknowledge this set of material as source)	<a href="http://www.ict-innovation.fossfa.net/wiki/public-wiki/course-advanced-african-foss-business-models/national-course-versions/trainers-space">http://www.ict-innovation.fossfa.net/wiki/public-wiki/course-advanced-african-foss-business-models/national-course-versions/trainers-space</a>

## About [ict@innovation](#)

The ict@innovation programme builds capacities in African small and medium ICT enterprises to make a business with Free and Open Source Software (FOSS). ict@innovation aims to encourage the growth of African ICT industries, particularly in Southern and East Africa, through three main actions: spreading FOSS business models for enterprises in Africa, fostering FOSS certification and supporting innovative local FOSS applications for social and economic development. ict@innovation is a partnership of FOSSFA (Free Software and Open Source Foundation for Africa) and InWEnt - Capacity Building International (Germany). The programme focuses on Free and Open Source Software (FOSS) as a key technology to drive innovation, add local value and create sustainable and affordable ICT-solutions.

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