GC21 Regulars' Table, 25 February 2011

Open Educational Resources and Open Licensing for Capacity Building

Open Approaches to educational provision

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What I will speak about:

- *Overview of the changing educational landscape*
- *Open Education – an introduction*
- *Open Educational Services in practice: the openSE, openEd 2.0 (UNU-Merit), ict@innovation (GIZ)*
- *Open Licensing for Human Capacity Building*
- *License of this presentation (as a template …)*
- *Contacts*

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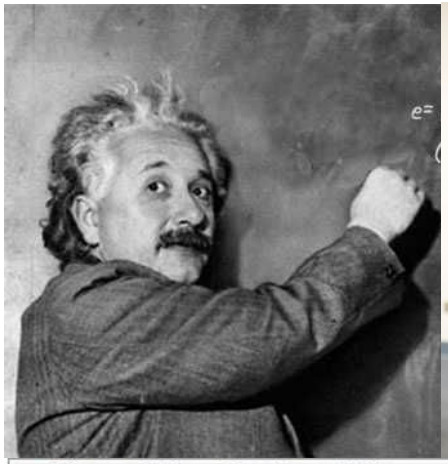
A brief overview of the changing landscape of education: what happened so far?

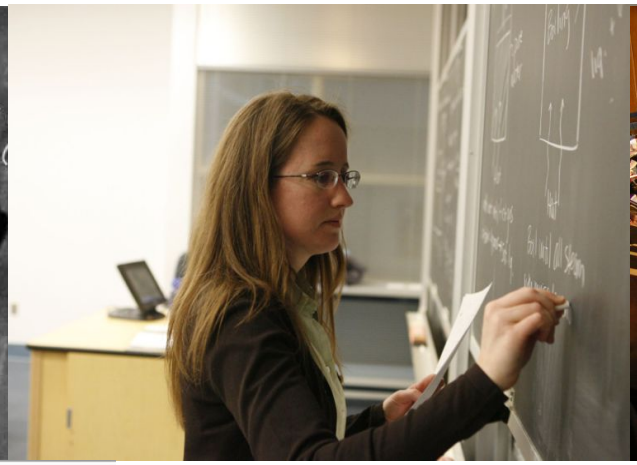
The recent past

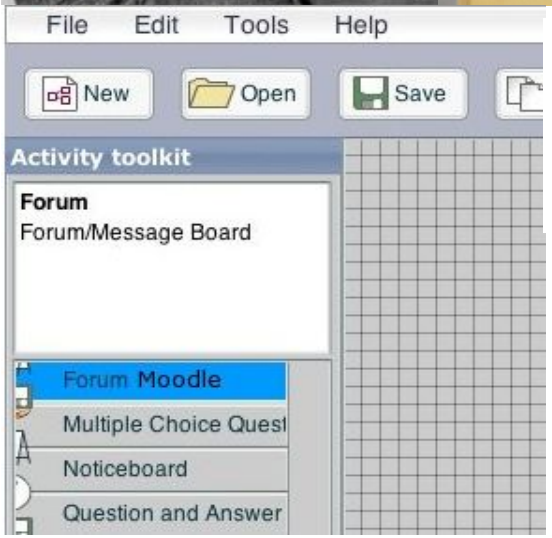
- Despite all of the potential the Web 2.0 provides education still has adapted very little in response to them with graduate education often not employing the power of new media in visionary or effective ways
- Education structures are still largely ‘analogue’, ‘closed’, ‘tethered’, ‘isolated’, ‘generic’ and ‘made for consumption’
- This is in sharp contrast to the learning environments the Web 2.0 provides, which are ‘digital’, ‘open’, ‘mobile’, ‘connected’, ‘personal’ and ‘driven by participation’

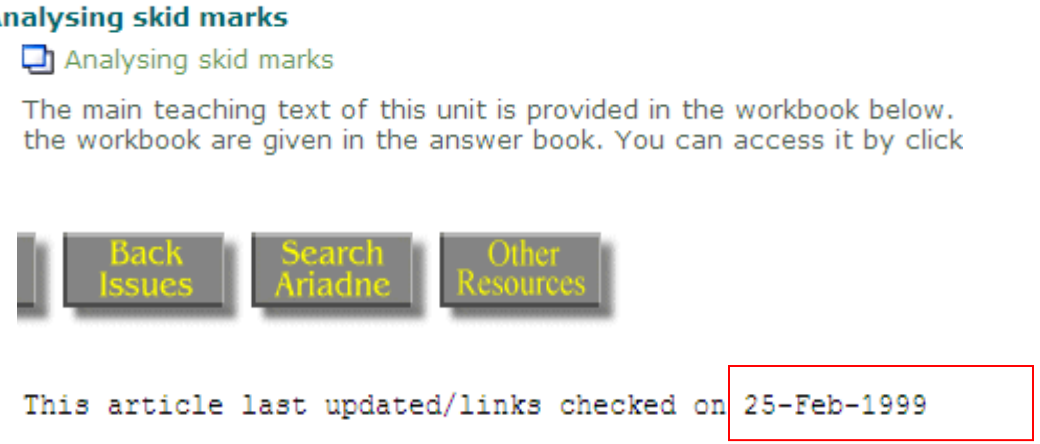
“Students are inside a classroom (tethered to a place), using textbooks and handouts (printed materials), they must pay tuition and register to attend (the experience is closed), talking during class or working with others outside of class is generally discouraged (each student is isolated though surrounded by peers), each student receives exactly the same instruction as each of her classmates (the information presented is generic), and students are students and do not participate in the teaching process (they are consumers).” (Wiley 2006)

Learning as a finished and delivered product to be consumed

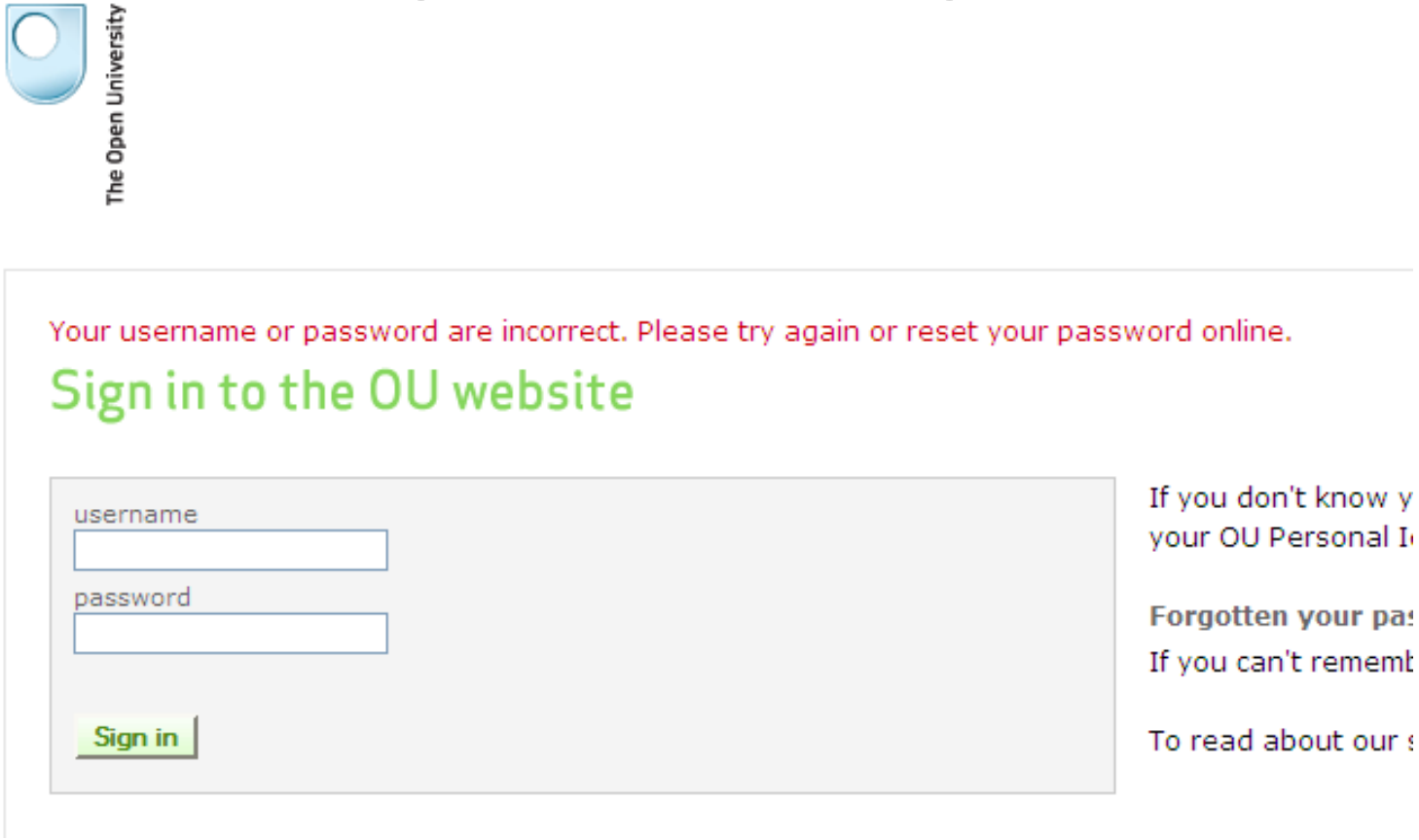








A myriad of closed systems

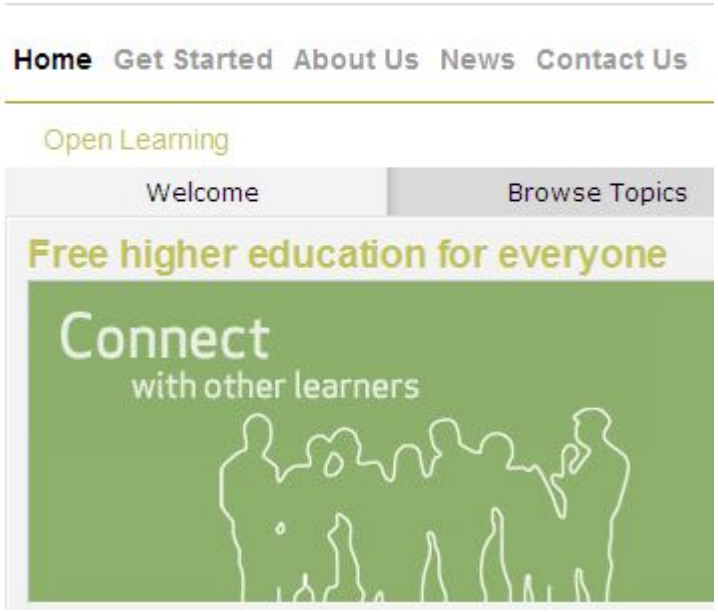


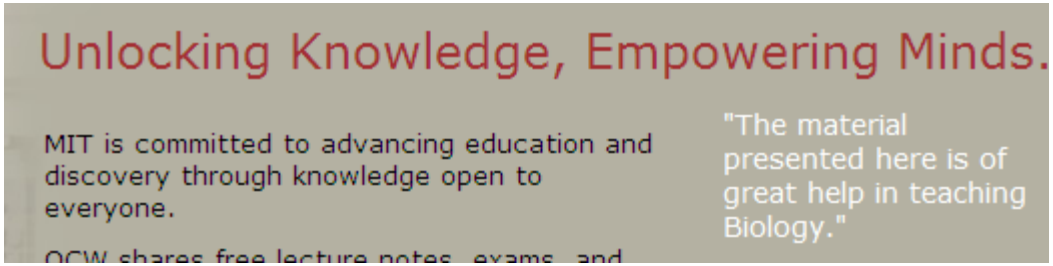
What happened further in between then and now?

- A vast and constant move towards the use of online resources fostering a **change from 'analogue' to 'digital' and from 'tethered' to 'mobile'** ...
- Characteristics such as 'open', 'connected', 'personal' and 'driven by participation' are more and more addressed...
- The start of the **Open Educational Resource (OER) movement** marked a tipping point towards 'openness' in the sense of 'Open' and 'Free'...

…But the OER movement still follows very much the traditional models (static, made for consumption, teacher/learner separation, enrolled learner/learner outside of formal education ['free learner'] separation…)

The Open Educational Resource movement





So, where are we NOW?

- Emergence of an advanced type of openness where formally enrolled students engage with their peers at the Web 2.0: **peer-to-peer learning**
- with more and more open course and open education scenarios arising,
- resulting to an ever **blurring border between the formal and the informal**,
- where students and educators from different institutions, free learners outside of formal education and practitioners come together.
- This current emergence of "Open Education Material" might mark a tipping point towards an **educational commons**...
- What is needed now are supportive organizational models, structures and frameworks that allows for a more strategic integration and sustainability

The emergence of Free / Open Courses

The emergence of Free / Open Enterprise/Academic Educational Offers

Welcome to TeachingOpenSource.org

Open Source is becoming a dominant development model in the software industry. The next generation of software developers, computer scientists, system administrators, analysts, and build engineers need to understand Open Source and must be able to work efficiently within Open Source communities.

mozilla wiki

Search Go Search

History | View source | Discussion | Page

Personal tools

- Log in / create account

Navigation

- Main Page
- Community portal
- Mozilla News
- Recent changes
- Random page

Education/EduCourse

< Education

This is the wiki page for Open|Web|Content|Education -- a six week online course where educators learn about open content licensing, open web technologies and open teaching methods.

Co-organized by Mozilla, ccLearn and P2PU. Includes interactive online talks and hands on prototyping of open learning projects.

Starts on 2 April, 2009! Sign-up is closed now and participant profiles have been moved to the Participants page.

This is the original course announcement.

Open Education & Open Educational Services – an introduction

Benefits of 'Open' approaches to educational provision (1)

'Open' approaches to educational provision **provide a number of advantages** as they potentially:

•provide formally enrolled students and free learners outside of formal education **with real life learning opportunities** that are embedded within a **sound traditional formal educational context**

•enable formal educational providers to **improve** their **educational offers**, e.g. through improved support, cultural diversity, availability of a larger set of learning resources that is frequently updated, and ultimately practical experiences directly relevant for the profession

•open the door for **'free learners outside of formal education'** to learn together with their formally enrolled counterparts, thus providing **inclusive education to all**

•connect educational providers with professionals and practitioners thus allowing educators to assure that their **educational services match with market needs**

Benefits of 'Open' approaches to educational provision (2)

- **allow all type of learners** to get in contact and **to collaborate with professionals** from communities of practice, such as open source projects in the computer science case or open enterprise networks for other educational fields, which provides great opportunities for all type of learners to **enhance their employment opportunities**
- benefit the participating communities of practice (e.g. practitioners or open enterprise networks) through **the artifacts and knowledge contributed by learners** and the educational field at large
- lower the burden for the providers of educational services to support, mentor, tutor and guide learners because these **tasks can be shared** between different actors, including the learners themselves: up to "total peer-to-peer education".
- allow for **new service based revenues** (learning for free & assessment/certification against fees) and combined course versions (e.g. triple community/certificated/integrated versions)

Open Educational Service Definition

Open educational services are:

• A **new form of services** in the educational domain that are characterised **by independence** (by and large) from existing physical educational infrastructures (schools, universities, teachers etc.).

• Draw on the self-organisation of the learning process (in communities), on community-based production of learning material, and on flexible roles of teachers and learners.

• **Examples** of open educational services are self-organised online learning courses, peer-to-peer and community based learning ecosystems, or open production and innovation communities and networks.

• Open educational services **in a majority of the cases** would **co-exist** with traditional educational provision and **complement** one the other.

Enablers of Open Educational Services

The provision of open educational services has become possible through – inter alia – the following factors:

• **Open and freely available open educational resources**, such as the UK Open University's OpenLearn initiative, or the materials made available by the European openSE project and the Free Technology Academy, MIT, ict@innovation etc.

• **Free and Open Source Software solutions** that allow cost-effective and interoperable learning ecosystems

• **Web-based and commonly freely available services and tools** for online collaboration, production or presentations

• **Open virtual learning networks and communities**

• **Open sharing and collaborative development networks**, such as the Open Learning Network - OLNet operated by the UK Open University.

•A **cultural shift** and **enhanced skills set** of learners; now being used to act as **prosumers / peer-to-peer innovators** or to take on part of the roles and tasks they used to be provided with (e.g. 'online check-in', 'self printed boarding passes', 'consumers that design products', etc.)

The ‘Tools’ perspective

From the ‘Tools’ perspective two distinct aspects are relevant to open educational services: **the educational provision and the educational recipient perspective.**

•The **educational provision perspective** considers **open sharing** and **collective intelligence** and **'openness' as a transfer mechanism**, including open learning, open educational resources or open research. It focuses on the **(co)production** of open educational resources, the **use** of particular tools to support their production, and strategies on how to deploy (retrieve, adapt, deliver, summarise, ...) them.

•The **educational recipient perspective** acknowledges that the learning environment is not only a condition for but also an outcome of learning. This perspective considers for example how to **provide learners with an open set of learning tools**, an unrestricted number of actors (learners, educators, peers, etc.), and **an open corpus of artefacts**, either pre-existing or created as part of the learning process – freely combinable and utilisable by learners within their learning activities. It **includes individual learning activities in formal as well as informal settings**.

The 'Models' perspective

The '**Models**' perspective considers **organizational models** that are key to the sustainable provision of open educational services and that take into account the different stakeholders involved, such as educational institutions, educators, formally enrolled students, 'free learner' outside of formal education, enterprises as producers, consumers or collaborators, or established virtual communities of practice, such as Open Source communities or Wikipedia.

The models perspective recognizes that **tools alone are of limited value** if no organizational models are in place to make effective and meaningful use of such tools. Organizational models on how to design and implement Open Educational Services consider – inter alia – the following aspects:

- **Open Internship / Mentoring Models**
- **Open Learning Support Models**
- **Open Course Models**
- **Open Production Models**
- **Service Based Business Models to allow for financial sustainability**

Potential Developmental Impact of Open Education & Open Educational Services

- Open education could allow for a higher level of **digital inclusion** and for the provision of innovative open educational services of **high socio-economic impact** in economies.
- Open education could significantly affect **economic growth and provide poverty alleviation**. Many countries, in the developed and particular developing world, and their citizens, would gain from **improved access to education** and the development and **localization** of open educational services **that truly fits their needs**.
- Open educational services that meet actual local needs could have **a high impact in the poorest and most remote areas**, regions affected by the “Digital Divide”. Such regions could perhaps even emerge as leaders in the next phase of the global educational service economy – i.e. ‘educational offers with a soul’ that address societal needs.
- Especially in developing countries or poorer regions **the number of open education producer communities** and the variety of open educational service solutions is likely to **increase exponentially** through open educational approaches.
- … one can observe a **similar development** within the now mature Open Source Software domain…

Open Educational Services in practice: the openSE project (by UNU-Merit)

openSE – open educational framework for computer science Software Engineering

Project Objectives:

• **To set up** an Open Educational Framework for Software Engineering bringing together academia, formally enrolled students, fellow students, free learners outside of formal education and open source practitioners and enterprises.

• To systematically **combine formal and informal learning** within an unfettered informal learning environment.

• To **stimulate participatory learning experiences** and foster practical 'hands-on' sessions where learning activities and output become a learning resource itself.

• To enable current and future learners to **benefit continuously and fully** from others' achievements, regardless where these achievements have been made => including to **bridge the 'community idea' with the 'semester principle'** (and its resulting 100% community turnover)

openSE in a nutshell

In a nutshell, openSE is a:

• **'Course directory'** with open access to courses of partner institutions ('core' course remains under ownership of partners to allow for technical diversity & to facilitate quality assurance)

• **'Learning space'** to connect formally enrolled students, fellow students and free learners outside of formal education

• **'Market place' / Mentored Internship Programme** – to bring together any type of learners and practitioners (from open source projects) to provide learner with (virtual) mentored internships within a real life setting

• **'Content repository'** for (non-core) course materials, or educational and instructional materials provided by learners, practitioners and the overall community

• **'Learning project repository'**, to make 'learning processes' and 'learning outcomes' available to future cohorts of learner, to contribute towards the emergence of a transactive group memory, to foster community building and collaboration, to allow for online profile building, to support Assessment & Certification/Recognition

• **'Assessment & Certification/Recognition space'** – for internships (through mentors) & courses (through respective institutional partner)

openSE course examples

openSE course examples Technical University of Tampere (TUT) & Free Technology Academy (FTA)

- TUT & FTA provide **'open access'** to their courses
- TUT & FTA **'share'** some of their course modules
- TUT & FTA **allow for 'free learners outside of formal education' to 'participate**' at their courses and to mingle and interact with the formally enrolled students through the openSE space
- TUT **offers 'assessment & certification'** to free learners outside of formal education (against fees) to **obtain 'formal recognition' & 'credit points'**
- FTA **provides 'credit points'** that are recognized by partnering universities towards completing a full Master Programme (with a FTA full Master Programme being currently under development)

openSE 'Mentored Internship Programme'

The openSE 'Mentored Internship Programme':

- Students & Free learners outside of formal education can apply for **mentored internships** within Open Source Software projects – free of charge
- Open Source Software projects can **advertise mentored internship opportunities** - free of charge
- Strategic founding partner from the Open Source Software field: **Apache Software Foundation (ASF)**
- From October 2010 **extended to Africa** through the 'African Virtual Open Initiatives and Resources' (AVOIR) network and integration of African Open Source Software projects, such as **Chisimba**.
    - **North/South link** – mutual benefit for EU/African educational and Open Source Software developer communities.
- **Automated Certification** – upon internship completion students/free learners can obtain a certificate for their mentored internship (currently under development)

openSE partnership

10 project partners, including networks:

• Aristotle University of Thessaloniki (GR), EPITA, Ecole pour l'Informatique et les Techniques Avancées (FR), European Learning Industry Group / ELIG (AT), Free Technology Academy (NL), Sociedade Portuguesa de Inovação (PT), Tampere University of Technology (FI), The Open University / IET (UK), Universidade Rey Juan Carlos (ES), University of Oxford / OSSWatch / Apache Software Foundation (UK), UNU-MERIT (NL)

• **From October 2010 extended to Africa** as part of the German funded €2.7 million ict@innovation programme, 'Mentored Internship Programme' action line, implemented with the 'African Virtual Open Initiatives and Resources' (AVOIR) network, a network of university nodes currently with 13 nodes across Africa.

GIZ's ict@innovation programme in Africa

Goal: Building capacities in African small and medium ICT enterprises to make a business with Free and Open Source Software (FOSS). Encourage the growth of African ICT industries, particularly in Southern and East Africa (first phase).

Timeframe: 2008 – 2012

Main themes:

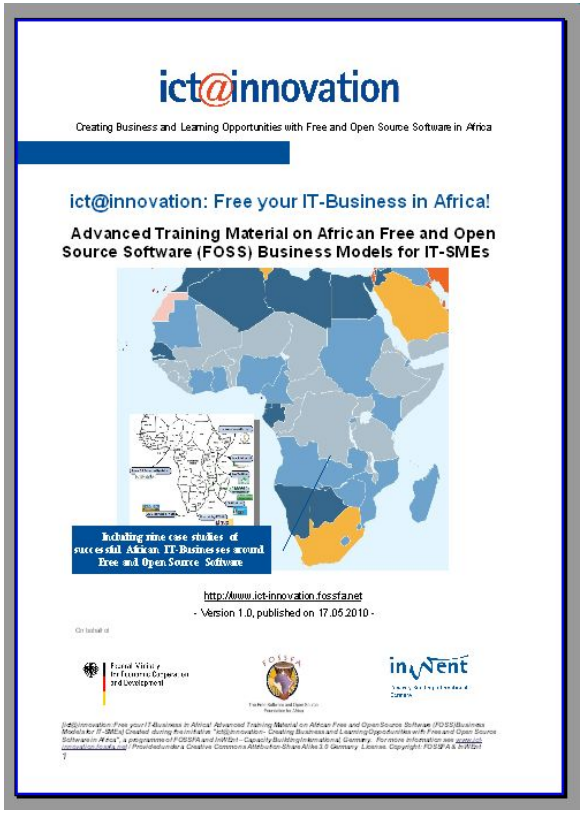
1) Spreading FOSS business models for enterprises in Africa
2) Fostering FOSS certification
3) Supporting innovative local FOSS applications for social and economic development.
4) Regional networking and international exchange

ict@innovation: Building collaborative open training material

Knowledge on African Open Source business models captured in collaborative open training material and published as

"Free your IT-Business in Africa! - Advanced Training Material on African Free and Open Source Software (FOSS) Business Models for IT-SMEs"

Online at:
http://www.ict-innovation.fossfa.net



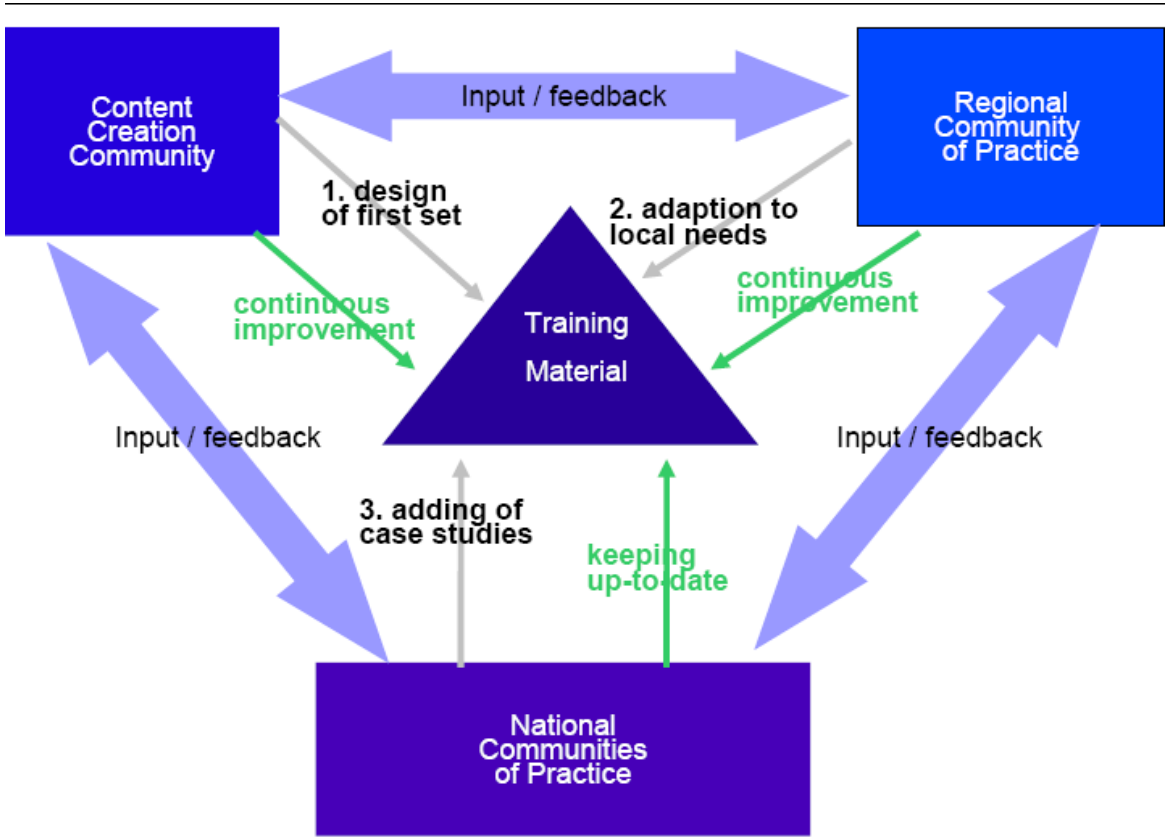
Training of Trainers & Open Training Material

Meta -Network of:

- content creation community
- Regional community of practice (Trainers)
- National communities (Trainers and participants at local level)

→ Blurring of roles: learners / trainers / creators / consumers / prosumers ...

Training material under open licences: allows modification, commercial distribution as „share alike“ = giving back to community



Open Licensing for Human Capacity Building

- Human Capacity Building → Focus on „Capacity to Build Capacity“ through advanced training:
  - Training of Trainers
  - Multiplier training
  - Peer-to-peer learning within expert networks
  - Open e-learning / blended learning
  - Etc...

- Putting training material under Open Licences: making use of the power of ‘Open’ approaches to educational provision

How open Licensing of training material supports „Capacity to build capacity“

- More **impact** and **ownership**: Multipliers are „free“ to reuse and build on training material, they „own“ it
- **Promotional effects**: Attribution of GIZ in all future versions of training material (the „MIT“ effect)
- **Access to vast repositories** of open educational resources (e.g. 17 Million articles in Wikipedia) – such material requires use of open licensing („share alike“)
- **Input to own material** through community: „Free“ updates, sharing of third party material, contribution to global pool of knowledge commons (e.g. energypedia of GIZ)
- Easier **Monitoring** of impact (open sharing allows open tracking)

How open Licensing of training material supports „Capacity to build capacity“ (continued ...)

- Additional capacity building effects for multipliers: „**Learning by updating** the material“ and „build-up of peer-to-peer networks around the open material“
- **Decreased risk of distortion of competition**: public sector material can be freely accessed by private sector competitors (commercial and non-commercial use by all parties is possible, unless a „non-commercial“ clause is used in the open license). At the same time the developmental goals can be achieved in terms of „capacity to build capacity“
- **Sustainable use of material** and **local business models** are promoted: commercial and non-commercial use by GIZ and by partners / local multipliers is assured

Points to be considered when using open licensing:

- As a copyright owner, you have **less control** over the (re-)use of the material („freedom of others“): therefore, it is important to make sure that your own organization is not inappropriately associated with future versions of the material. A good tool is a „**sticky disclaimer**“ to be attached to all future versions (see example on next slide)

- It is primordial to own all copyrights of the material before releasing it under open licenses. Often, problematic areas include photos and charts taken from other sources, which are not appropriately licensed. Solutions: only use own material or material, which is compatible to the open license chosen

- Some business models are restricted by open licenses. E.g. selling the material itself. Solution: Go for **business models involving services** such as mentoring, tutoring, facilitation, training services (see slide on "The Models' perspective).

Created by Balthas Seibold & Andreas Meiszner for the GC21 Regulars' Table,an initiative of GIZ

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Additional info for discussion

Advantages and Disadvantages of the different Models

[some] Advantages of traditional educational structures over informal online learning

• **Educator input** – to provide students with guidance and support.

• **Structure** – learners approaching a new subject area value the structure and focus offered.

• **Learning objectives** – to set out for students what they should be able to learn through the experience.

• **Assessment** – some form of formal assessment and the possibility to obtain a degree or certification

• **Face2face interaction** with others – students as well as educators.

[some] Advantages of informal online learning over traditional educational structures

• **A greater range of inputs** – not just from the educator, but from all contributors so the collective is the source of knowledge, not one individual.

• **A more personalized learning experience** – learners can gather the elements of knowledge they require – but skip what they know already.

• **Greater sharing of knowledge** – in higher education much of the previous input is lost, whereas in online learning environments the dialogue, resources, and outputs remain as learning resources.

• **Peer production** – active engagement in producing something with a set of peers is a powerful motivational and educational driving force.

• **Real activities** – engaging in legitimate activities that are not restricted to an artificial university setting also provides valuable experience.

• **Peer support** – a large support network provided voluntarily by peers in a collaborative manner nearly 24/7.

• **Open learning environment** – The sum is bigger than its parts, thus there is the need of providing new educational models and scenarios that are not limited to students formally enrolled at a course.

openSE vs. openEd 2.0

• openSE is a Free / Open framework that **can host multiple courses**, such as the openEd 2.0 course (but also other) and at which **production communities** (here Open Source Software communities) **are added** to educational communities and at which students or free learner outside of formal education can do **a 'virtual internship'**.

• **At both**, openSE and openEd 2.0, some of the partnering **institutions let their (formally enrolled) students participate**, who might then be **awarded 'formal recognition' for this participation**, based on the 'assessment' of the students' 'assignments'. Those 'recognitions' would then count for the students' regular study program (partly fitted in over 'electives').

• **openSE is less focused on the individual courses** and **does not demand any particular format of the courses it hosts, except being open accessible ('open to read')** and that the formally enrolled students of a respective course would **submit their 'assignments' to the openSE 'learning project directory' (so future learners could benefit from it).**

• **openEd 2.0 focuses on open course organization** in the sense of **'open to participate'**. The openEd 2.0 organizational model might serve as a **blue print for other courses**, such as the ones hosted within the openSE framework.

• openSE & openEd 2.0 **share the same technological environment** at the moment, **as well as the same underlying methodologies**.

OpenEd 2.0 – designing for participatory learning in open educational environments

Project objectives:

- **Develop** experimental **approaches for participatory learning** within open educational environments
- Implement and test those approaches by means of 3 consecutive pilots **to promote continuity, community building and evolutionary growth**
- Develop and test **revenue models** – in accordance with pilots' results – to assure financial self-sustainability
    - To implement and test **"for fee" assessment and credit award mechanisms** alongside the pilot as part of the sustainability framework that will be developed
- **Analyse** the results & benchmark them against initial assumptions

The openEd 2.0 course: Business and management competencies in a Web 2.0 world

- **openEd 2.0 is a FREE/OPEN course** targeting business students and practitioners alike. The course consists of two strands: an academic and a professional practice based strand, though both strands can be taken together.
- The openEd 2.0 course is **MODULAR**, thus learners can also "pick" the individual modules they are interested at.
- The **design of the openEd 2.0 course is 'open'**, thus anyone interested can 'contribute' to the course contents and structure – for the initial version as well as for later releases.
- Pilot 1 Schedule: Duration 12 weeks, **Start – 25th October 2010**, Christmas break – 20th December 2010 to 2nd January 2011, Ends – 31th January to 4th February with Final Presentations & Wrap up
- **Workload** for respective modules between 10 and 30 hours per module; for the overall course 120 hours for academic OR professional strand and 180 hours for academic and professional strand
- **Multilingual support** in English, French, Portuguese, Greek

openEd 2.0 in a nutshell

In a nutshell, openEd 2.0 is a:

- **'Module directory'** with open access to modules developed collaboratively or individually by the partner institutions
- **'Learning space'** to connect formally enrolled students, fellow students and free learners outside of formal education
- **'Place to do 'project works''**, collaboratively or individually, using a range of technologies (Market place / Mentored Internship Programme alternative used at openSE) to allow for 'hands-on' sessions and real life experiences
- **'Content repository'** for course materials, or educational and instructional materials provided by the overall community
- **'Learning project repository'**, to make 'learning processes' and 'learning outcomes' available to future cohorts of learner, to contribute towards the emergence of a transactive group memory, to foster community building and collaboration, to allow for online profile building, to support the learner assessment & certification/recognition
- **'Assessment & Certification/Recognition space'**:
    - **automated self-print certificates** including 'Project works' submitted per module as well as peer-assessment information in the name of the openEd 2.0 project and its partners
    - **individual assessments and certificates** through the participating institutional partner and in the name of the partners
    - **'Credit points' for participating students** that have taken the course, or some of its modules, as 'electives' within their general studies.