CHAPTER 8.
CONTENT MANAGEMENT

Content is king and the most important part of any ICTD effort. Infrastructure can be in place, access can be provided, websites and portals can be designed, but if there is no content, there can be no hope of use. ICTD content poses the greatest of challenges, both for the developer and for the user. Content is part of the user experience that often determines the success or failure of any ICTD effort.

Content can be defined as any material, in text, audio-visual, film, still photographs and graphics (including graphs, charts and animations). It can also include narratives, interviews, dramatization, and any other form of matter that is used to populate the website, for example SMS, wikis and blogs. Very simply stated, we can: "define content broadly as 'the stuff in your Web site.' This may include documents, data, applications, e-services, images, audio and video files, personal web pages, archived e-mail messages, and more. And we include future stuff as well as present stuff."[211]

Content development is a critical area that is often overlooked or given less importance in ICTD interventions. However, it is the most important. Currently, there is a lot of material already available on the Internet and in other places, but the bulk of the content is currently developed in English (English being the most common language of the Internet), and may be of little relevance to local conditions in developing countries. Common concerns raised by ICTD specialists in developing country contexts and projects often point to the fact that the content is lacking. What there is, is often protected by copyrights and intellectual property laws, and is not freely available. Furthermore, the content lacks local relevance.

There are many challenges that need to be addressed in the areas of language and content within the Asia-Pacific context, where English language proficiency is not high, especially outside metropolitan areas. Even in countries such as India and the Philippines, which have optimized the benefit derived from a large pool of English speaking software and content development specialists, language and literacy issues pose a major challenge for socially disadvantaged populations, cultural minorities, and women in particular.

8.1 Content Issues and Content Development

Many other questions need to be addressed when planning the content aspect in ICTD interventions. For instance:

- Who are the users and what are their needs, i.e. what are the users' profiles? What are their language needs? Who is the content suited for? Who are involved in the creation of content?
- What biases—social, cultural, economic, religious, linguistic, and gender—does the content address?
- Is the content realistic in terms of the community experiences? For instance, is it relevant in terms of the women's experiences? Is it locally developed? And what share do the women have in developing their own content?
- How is the content organized?
- Is the content meeting information needs? Is it accurate? Is it up to date?
- How has the technology been modified to make it easy for the users to use, hear and understand?

211 Peter Morville and Louis Rosenfeld, *Information Architecture for the World Wide Web* (O'Reilly Media, 1998), p. 219.

- Is individual and group use built in and encouraged? Is locally produced content encouraged and used?
- Does the content encourage, promote, and facilitate interactivity and feedback?
- What support systems, such as ground-level facilitators and other materials, have been included and made available?
- What mechanisms are in place for correction and modification of the content?

Current developments in technologies and applications such as FOSS, Web 2.0 applications and mobile telephony address some of the inherent weaknesses of earlier efforts. They offer flexible responses to some chronic challenges that earlier efforts faced.

The first of the challenges is the issue of localization of content, including the translation, customization or original creation of content in a local language. An inherent feature of FOSS is its flexibility and the freedom it provides to users and developers to adapt and improve the software to meet their own particular needs, including language requirements. The FOSS application can be customized to suit local requirements by linking set language templates to the software, without disturbing the underlying software code. Such use of FOSS for localization builds technical expertise in the local community, while reducing dependence on expensive imported proprietary software.

Web 2.0 applications that allow individuals to create their own content, whether in the form of blogs and wikis, offer opportunities for local content development. So do social networks available on the Internet today. Web 2.0 applications are based on the principles of user participation and user-generated content. They are open and encourage sharing, interactions and collaborations. Thus, if one combines FOSS software and applications and local language fonts with Web 2.0 applications including social networks, it is possible even for a village with minimum ICT skills to access, use, create and share content for his/her own needs and for community needs.

Figure 36. FOSS and Web 2.0 applications available for users to build their own content

Source: David M. Kennedy, "Copyleft and Web 2.0: Opportunities for Engaging Learners", presentation made at iCOOL2007: Pedagogical Scription for ODL, 13 June 2007, slide 9, http://www.slideshare.net/deekaay/copyleft-and-web-20-opportunities-for-engaging-learners.

Mobile telephony opens up yet newer and more flexible opportunities for both content and services. With today's mobile phones coming with inbuilt capabilities for SMS and Multimedia Message Service (MMS), individuals can create simple messages and communicate individually or in groups with each other. In addition, with the rapid development of applications available for mobile (m-apps) a quick and easy mobile uptake is the preferred option for service providers. In developing economies, service providers and operators are developing mobile services such as mobile banking, remittance payments and mobile health services that take advantage of the lack of access by the poor to social infrastructure such as banks and hospitals.

Case 25. MMS and the women in Theni: Creating local content for local use

Theni is a poor, chronically drought prone district in Western Tamil Nadu, India. The people are poor, marginal farmers, who work on their small plots of land, while also seeking off-farm employment through India's MGNREGA scheme.

Everyday, between 2 p.m. and 2:30 p.m., 5,000 women members of the self-help group in Theni receive a voice mail over their individually owned mobile phones. The voice mail will give them information and knowledge about a range of issues, from local employment opportunities, free legal aid clinics, health and hygiene tips, and women's empowerment issues.

Figure 37. Theni women using mobile phones to communicate

Source: VIDIYAL, http://www.vidiyalngdo.org/ict.htm.

How was this done? VIDIYAL, the local NGO that facilitated the use of mobile phones for communication had little knowledge about the potential of the instrument. A chance experience of a political message coming over the mobile phone made the local NGO wonder if the mobile phone could be used to network and communicate to all members of the self-help group. A partnership was forged between the NGO, the women themselves and a mobile service provider. Under the agreement, the women members of the group each purchased a mobile phone and connection from the service provider and placed a minimum service subscription on it. The service provider agreed to send one voice mail message per day to the members. The voice mails in Tamil, the local language, were recorded by the self-help group leaders at a rudimentary facility at the NGO's office, sent via Internet to the mobile service provider who in turn blasted this voice mail to the membership list. This facilitated the horizontal transfer of knowledge, enabling local content production and dissemination.

The NGO has also created Village Knowledge Centres (telecentres) where the women and other villagers can go to access additional information.

An impact assessment by the author on the use of ICTs at Theni revealed that the voice mail is eagerly awaited every day. For the women of Theni, the voice mail is a friendly medium as it addresses the problems of both literacy and language. The mobile phone offers them a flexible and familiar way of accessing knowledge and content that is localized specifically to meet their relevant needs. The women will not trade their mobile phones even for gold.

Sources: VIDIYAL, "ICT based Life Long Learning (L3) Farmers and Knowledge Infomediary", http://www.vidiyalngdo.org/ict.htm; and personal visit for impact evaluation of the project by the author.

Despite the greater ease of use that current ICTs and new applications provide for a larger number of people to access and use, it would be erroneous to assume that it is possible today for even the illiterate village woman to use and harness ICTs for socio-economic development. Content development and management is a specialized skill, especially in an ICTD context, when an understanding not just of language, but also of different types of technical content becomes essential.

Content issues cannot be separated from issues of ethics, copyrights and IPR. These are briefly discussed here.

8.2 Ethics, Copyrights and IPR

This brief section on ethics, copyright and intellectual property issues in the use and study of ICTD is meant to serve as a quick introduction and a guide for students and readers so that they are aware of the key issues and debates, and that they are guided in their decision-making both theoretically and in the field when confronted with moral dilemmas. This section is considered very important, and students/readers are encouraged to read the various sources cited during the discussion for a greater understanding of the concepts.

In section 1.4 on Managing Human Development, it was argued that managing development was both a political and an ethical process. While political processes imply choices and the making of them, ethics deals with the philosophical foundations of such decision-making; of the values that underpin such decision-making that will enable the choice between good and bad options, between rights and responsibilities.

Ethics

Ethics is also concerned about the conduct of human beings. All scientific activities, including those in social sciences, and consequently development, are conducted with the participation of human beings or have an impact on human beings and/or the wider society as a whole. Therefore, development activities, with or without ICTs, cannot be free of ethical responsibilities and judgments.

The introduction of ICTs as inputs in the development process is also not free of ethical concerns. This is because ICTs are introduced into an existing culture, with its own identities, norms and values of what is "good" and what is "bad".

Essentially, the purpose of ethics in development is to ensure that certain common principles are observed in the day-to-day practice of development work. Within the realm of ICTD, it is also necessary to keep in mind and rigorously observe critical aspects of copyright and IPR.

Copyrights and Intellectual Property Rights[212]

Everyone and anyone who has used their own intellect, hard work and creativity, feels entitled to the protection of the process and product of their labour. The idea of copyrights and IPR enshrines this principle that is part of many international agreements and conventions. Although copyrights and IPR may vary from country to country, there are some common standards applied worldwide.

Essentially, intellectual property refers to "creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce."[213] Intellectual property is divided into two categories:

1. Industrial property, e.g. inventions (patents), trademarks, industrial designs and geographic indications of source.
2. Copyright, e.g. literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs. Rights related to copyright include those of performing artists in their performances, producers of phonograms in their recordings, and those of broadcasters in their radio and TV programmes.

Ethics requires that intellectual property be respected and that the author or inventor receives the benefits from his/her property. Ethics are principles of conduct that cultures generally agree upon. There is no state coercion involved if you do not behave in accordance with the standards. However, in the case of IPR, law is backed by the power of the state to compel, to punish and coerce compensation of loss in case of violation.

Issues of copyright and IPR become even more important in ICTD as choices are made about proprietary and FOSS, and issues centre largely around the illegal use of proprietary software (called piracy) and illegal use of content (plagiarism). Both piracy and plagiarism are clear violations of both ethics and the law, and are punishable by legal action under laws of many countries.

This is where FOSS has clear advantages over proprietary software, as it has been created as a matter of freedom. If copyright exist to provide legal protection to authors of documents and software so that they cannot be used without permission, "copyleft"[214] provides a method for software or documentation to be modified, shared, and distributed, provided it remains free.

This does not mean that what is not covered by copyright is automatically free for use. Material for public distribution can also be protected under the Creative Commons,[215] a non-profit organization that has released several copyright licenses, known as Creative Commons licenses, free of charge to the public. These licenses allow creators to communicate which rights they reserve, and which rights they waive for the benefit of recipients or other creators. Creative Commons was invented to create a more flexible copyright model, replacing "all rights reserved" with "some rights reserved"—to make content more compatible with the full potential of the Internet (that enables innovation and problem-solving by interconnecting with others at a global level, sharing knowledge and building upon creative works). Under the Creative Commons, it is possible to ensure wide distribution of knowledge products while at the same time ensuring that the rights of the original authors are protected.

212 The contents of this section have been summarized from information available at the WIPO website. To learn more, students and readers are advised to go to the site, http://www.wipo.int/about-ip/en/.

213 Ibid. See also WIPO, "Understanding Copyright and Related Rights", http://www.wipo.int/freepublications/en/intproperty/909/wipo_pub_909.html.

214 See http://www.gnu.org/gwm/libredocxml/x53.html.

215 Creative Commons, http://creativecommons.org.

The importance of ethics, copyrights and IPR cannot be understated for anyone studying and working in the field of development in general, and ICTD in particular. In development, the focus is on people, many of whom are poor and vulnerable to exploitation. Within a human development approach, with rights and social justice at heart, their human rights cannot be ignored or brushed away. With the realm of ICTD, the engagement, in addition to core development issues is with the use of hardware and software, and of content (proprietary and open)—all of which are governed by copyrights and IPR laws. Neither science nor society—the realm of social sciences—is value free; both are changing and evolving and converging in more ways than in technology alone. And as long as ICTD deals with both technologies and human societies, ethics will remain central to the discussion and will be a critical, if an invisible component of the quality of ICTD efforts.

Points to Remember

- Content can be defined as any material, in text, audio-visual, film, still photographs and graphics (including graphs, charts and animations). It can also include narratives, interviews, dramatizations, and any other form of matter that is used to populate the website, for example SMS, wikis and blogs.

- Content development is a critical area that is often overlooked or given less importance in ICTD interventions.

- Current developments in technologies and applications such as FOSS, Web 2.0 applications and mobile telephony address some of the inherent weaknesses of earlier efforts. They offer flexible responses to some chronic challenges that earlier efforts faced such as localization and relevance.

- Intellectual property refers to “creations of the mind” for which property rights are recognized. Intellectual property can be divided into two categories:

    - Industrial property, e.g. inventions (patents), trademarks, industrial designs and geographic indications of source.
    - Copyright, e.g. literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs.

- Emerging from the ICT revolution are efforts to create a more flexible copyright model, replacing “all rights reserved” with “some rights reserved”—to make content more compatible with the full potential of the Internet (that enables innovation and problem-solving by interconnecting with others at a global level, sharing knowledge and building upon creative works).

- Ethics requires that intellectual property be respected and that the author or inventor receives the benefits from his/her property.

Practical Exercise

In the normal course of their teaching duties at the local college, several faculty have reported finding pirated software improperly installed on the computers in the computer labs. Faculty also found that students have copied and pasted materials from various Internet resources into their own assignments and reproduced them as if they were their own. This, they find, is a common problem among their students. Before taking a decision on what should be done, faculty asks you, as students, for your inputs to decision-making.

List:

1. What are the ethical and IPR issues that the faculty are confronted with?
2. What are the steps that the faculty should take to address the ethical and IPR issues?
3. If you were the student who copied and was caught for plagiarism, what are the consequences you would expect?

Test Yourself

1. ICTD solutions should be designed to be:

   a. Cheap
   b. Sustainable and process oriented
   c. Sensitive to local conditions
   d. a and b
   e. b and c

2. “Localization of content” means:

   a. Making content culturally appropriate
   b. Translating content to local languages
   c. Both
   d. Neither

3. Mobile telephony allows content to be shared through MMS even if a person is:

   a. Not literate
   b. Does not know English
   c. Both
   d. Neither

4. Software programs and applications, unless they are FOSS, are protected through:

   a. International agreements and treaties
   b. WIPO
   c. Are not protected and can be pirated
   d. Copyrights and IPR laws in each country

5. Which of the following statements related to Creative Commons licenses and copyright is incorrect?

a. A copyright is a set of exclusive rights granted by a state to the creator of an original work.
b. Creative Commons licenses aim to create a more flexible copyright model, replacing “all rights reserved” with “some rights reserved”
c. People who use a Creative Commons license give up all of the rights to their creation
d. Creative Commons licenses make online sharing and collaboration easier