The Discourses of OERs: how flat is this world?

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Abstract:

This paper proposes Critical Discourse Analysis (Fairclough, 2000) as a tool for identifying the various discourses that can be found in the provision of open educational resources. The argument will be built upon the concept of a ‘flat world’, a powerful metaphor used by Friedman in his famous book “The World is Flat” (2005). The discussion will draw upon concepts of critical discourse analysis to explore sample data from open educational resources (OERs) initiatives, and will investigate the degree to which such initiatives have a ‘flattening’ effect in terms of widening participation and empowering individuals through access to knowledge.

Keywords: OERs, open content, discourse, critical discourse analysis

1. Introduction

In his bestselling book ‘The World is Flat’ (2005), Thomas Friedman introduced a new way of describing the social changes that have been taking place in the world due to technological advances: the metaphor of flatness. Saying that the world is flat means accepting the view that the playing fields have been levelled and that competition and collaboration are now more fine-grained; they take place not only on a societal and institutional level but also between individuals. The metaphor of flatness is supported by the concept of openness, which is the trend in businesses, government and education. Openness offers a means to remain competitive rather than constituting a threat to one’s ideas and assets. Alongside this openness comes a second factor, that of collaboration. The greater the degree of collaboration, the more expertise and outreach one can gain. Collaboration has become intrinsic to the notion of openness and is also intrinsic to this metaphor of a flat world.

But what is the relationship between this idea of a flat world and open educational resources (OERs)? This paper starts from the premise that OERs have been claimed as part of this flattening world, directly or indirectly. OERs are freely available online, guided by the ideal that knowledge should be free and accessible to all. Knowledge is a powerful currency in today’s society, and those who possess it are more competitive. OERs represent openness to knowledge access, and as a consequence to the path that leads to competitiveness. OERs are also perceived as a path for collaboration: between countries, institutions and individuals in this sharing of knowledge. OERs, therefore, can be seen very much as part of this ‘discourse of flatness’.

However, the extent to which OERs can be real flatteners in education is yet to be assessed. This paper proposes a discursive perspective in which to look at this matter. It will be proposed that critical discourse analysis be employed as a powerful tool for
identifying some of the discourses embedded in the OER movement, and for assessing the extent to which they are aligned with the discourse of flatness. I will argue for a critical view with regard to this notion of flatness, both in the OER movement and in the discourses associated with it.

2. Critical discourse analysis: a powerful tool to investigate the discourses of OERs

There are different forms of discourse analysis in social science research, each one having a particular terminology and coming from slightly different theoretical positions depending on the area in question (for example psychology, education, politics, anthropology or linguistics). This shows the truly interdisciplinary nature of discourse analysis. In this paper I draw on concepts of Critical Discourse Analysis (Fairclough, 2000), which is based upon a Foucauldian perspective of discourse (Foucault, 1979).

Discourse, in this paper, refers to the institutionalised spoken or written language in use. This notion is also extended to include other types of semiotic activity such as visual images (photography, video, diagrams etc) and sound (podcasts, lectures). Discourse is a particular way of constructing a domain of social practice (Fairclough, 1995). It is more than simply putting together spoken or written words – discourses carry contextual, ideological and historical perspectives. They regulate social practices to the extent that they define what is part of a domain of practice and what is not. Discourses are the particular ways in which people think, talk and act about things – they are constitutive of the social practices while at the same time constituting them. Discourses are institutionalised because society is institutionalised: government, business, politics, schools, health care, media communication are all institutionalised social bodies that have their own practices. These practices are materialised through language in use. By analysing the discourses one is analysing the ways in which people think and act, historically defined, and the ideologies which are carried through their language choices. It is then possible to understand how social practices tend to become conventionalised and how these conventions are underpinned by similar discourses.

Fairclough (2000) presents Critical Discourse Analysis (CDA) as a useful approach in the critical study of language in social practices. More specifically, CDA is concerned with the study of language and discourses from a social perspective, and how language figures in processes of social change. Kress (1990) argues that CDA has an overtly political agenda and it is what differentiates CDA from other types of discourse analysis. He points out that CDA does not only provide accounts for the production of texts, but more importantly it provides a critical dimension in its theoretical and prescriptive accounts of texts. This means that the researcher in CDA takes a political stance on the subject under investigation and is expected to overtly criticise the perceived problem as well as attempt to offer alternative ways in which to approach it. CDA also points to the link between discourse and action: discourse becomes action and action becomes discourse (Scollon and Scollon, 2005). It employs interdisciplinary techniques to text analysis, and looks at how the discourses materialise in the texts and create representations of the social world. Critical
discourse analysis goes beyond the analysis of written and spoken words, providing insights into the ways in which identities are created and social relations are enacted. Unlike other types of discourse analysis, the type of CDA I draw upon does not focus on counting the frequency of words in a text, but rather on an understanding of how the often-unconscious use of language in a domain of practice (e.g. word choices) is constitutive of the dominant discourses of this social domain – that is, how the discourses are instantiated in language. This is achieved through an interdiscursive analysis of texts and their specific articulations of different discourses (Fairclough, 2005). The linguistic analysis of the text is also part of my analysis, but again in terms of lexical choices rather than recurrence.

This paper will focus on the collaboration and institutional discourses of OERs, and offer an overview of how the institutionalised language of educational institutions carry an ideological load that tends to portray OERs as educational flatteners and social equalizers. I acknowledge that institutional discourses are only part of the discourses of OERs; other discourses (similar or different) can be found in other domains of practice, such as the blogosphere and the user experience of OERs. Nevertheless, the stratification in which the data is discussed in this paper (e.g. apparently self-contained discourses) is merely a tool for analysis, a way of looking at the practices in the social world. Discourses operate together and are inherently dependent upon each other. For the sake of this paper, however, I discuss the collaboration and institutional discourses independently, by looking at their advertisement strategies and policy documents mostly.

Discourses have no boundaries but instead interplay with each other, and this is what characterises the complexity and dynamism of language in social practices. Discourses can be identified through language in use, and they are not fixed or immutable; they relate in a very fluid way. One could be talking about religion from a political perspective for example, in which case both political and religious discourses would be interplaying and creating meanings, defining social practices. The fluid and interoperable way in which discourses function is called interdiscursivity. No discourse is closed in itself. In fact, a discourse only comes into existence through its relationship with other discourses. There is no ‘pure’ discourse. From this perspective, when discussing the discourse of flatness as part of the institutional discourses of OERs one is also indirectly addressing others discourses that constitute it. The discourse of flatness is populated with the discourse of openness and the discourse of collaboration, for example. And so is the discourse of OERs, as I explore in this paper.

2. The flatteners: Friedman’s concepts found in the provision of OERs

In his book Friedman presents the ten ‘flatteners’ he claims are responsible for levelling the ground worldwide, and describes how these flatteners converge to make the world even flatter. This paper will draw on two of the ten – ‘open sourcing’ and ‘in-forming’ – and discuss the different discourses that constitute them from an OER perspective.

2.1 Open sourcing
Open sourcing, as described by Friedman (2005), supports the notion that “companies or ad hoc groups would make available the source code – the underlying programming instructions that make a piece of software work – and then let anyone who has something to contribute improve it and let millions of others just download it for their own use for free”. Friedman uses two varieties of open sourcing as examples: the intellectual commons and free software. The intellectual commons is rooted in academia, aiming to share research amongst groups of interest to advance science. Friedman quotes Andreessen (2005), who says “Open-source is nothing more than peer-reviewed science […]”. That is, science reviewed in a free and open way. Wladawsky-Berger (2005), also quoted by Friedman, points to the advantages of open sourcing and says “This emerging era is characterized by the collaborative innovation of many people working in gifted communities, just as innovation in the industrial era was characterized by individual genius”. For Friedman (2005) the intellectual commons form of open sourcing is a genuine flattener, because self-organized collaborative communities are working towards levelling the playing field in their areas. Friedman claims that many people like to share their findings to earn the respect of their intellectual peers. He sees this as a new form of collaboration that has been facilitated by the flat world and is flattening it even more.

In relation to free software, Friedman claims there is a movement inspired by the idea that software should be free and available to all, relying on open-source collaboration to produce and distribute it for free, although open source does not always have to be free. Both the intellectual commons and free software are concepts intrinsic to the OER movement. Universities involved in producing OERs are acting under an intellectual commons framework, making their knowledge available to people all over the world who can connect to the internet. Very often this knowledge is made available under the Creative Commons License, which means that the materials have only some rights reserved as opposed to the traditional all rights reserved premise of copyright law. Free software has also become very popular in distance education and in the OER movement. Moodle, for example, is an open source virtual learning environment which is proving to be of greater popularity amongst distance education providers than commercial software.

2.2 In-forming

Friedman (2005) describes in-forming as “the ability to build and deploy your personal supply chain – a supply chain of information, knowledge, and entertainment. In-forming is about self-collaboration – becoming your own self-directed and self-empowered researcher, editor, and selector of entertainment without having to go to the library or to the movie theatre or through network television. In-forming is searching for knowledge. It is about seeking like-minded people and communities”.

Friedman offers Google and Yahoo! Groups as examples of internet-based tools that allow for in-forming and for flattening the world. He claims that in-forming sets out to empower the formation of global communities across all international and cultural boundaries. Global acting, to Friedman, is a critical aspect of the flattening function. OERs are meant to be a global flattener for education. The fact that these educational
resources are internet-based means that they have a global reach: anyone who has an internet connection and a computer can theoretically also have access to OERs.

One of the main characteristics of the ‘in-forming era’, for Friedman, is the changing way in which companies are setting up their businesses. Friedman mentions Google and TiVo as examples of companies that learned to collaborate with their users by offering tailored shows and entertainment. TiVo is an innovative way to digitally record broadcast programmes. Both TiVo and Google have learned to thrive not by pushing products and services on their customers but by enabling the customers to ‘pull’ their own. Some OERs initiatives also have this characteristic, and they not only offer content but also technological tools that enable users to collaborate and communicate in order to gather the information they need and then tailor it for their specific purposes.

3. The Discourses in the OER movement

Most of the discourses found in the OER movement are aligned with the ones of flatness from Friedman. For the purpose of this paper I will draw on critical discourse analysis to identify two of these discourses: the discourse of collaboration and the institutional discourse.

3.1 The Discourse of Collaboration

Collaboration is a key concept in the flattening of the world, and a term that appears frequently in Friedman’s book. Friedman claims that the world flatteners are all reliant on the principle of collaboration, and that collaboration ‘turbocharges’ the flat world. Open sourcing, in-forming, outsourcing, offshoring, supply-chaining are examples of forms of collaboration that have been either made possible or greatly enhanced by the advance of technology and the Internet. He claims:

“And as more and more of us learn to how to collaborate in these different ways, we are flattening the world even more”.

(Friedman, 2005:81)

The Discourse of Collaboration, as in Friedman’s flatteners, is also present in the OER movement. Here are some examples taken from two open content initiatives showing how the discourse of collaboration is present in the OER world:

MIT OCW is committed to open systems and will share its approach with those who may want to launch similar efforts.

Extract 1: from MIT’s OpenCourseWare website

OCW now stands as a new model for disseminating knowledge, serving as a sort of “shared intellectual commons” available to educators and learners around the globe.
Sharing knowledge, expertise and ideas are ways to collaborate with peers in a given community. In the extracts above the words sharing/share and collaboration are indicators of the discourse of collaboration in the OER movement and of its alignment with Friedman’s world flatteners. In extract 2, for example, the intellectual commons flattener is spelt out. This has been classified by Friedman as part of the ‘open sourcing’ movement.

Collaboration presupposes that both parties involved in it have something to offer. In OER initiatives collaboration happens on different levels. It can happen between institutions, between the learners and the OER provider or between the learners themselves. However, most OER initiatives so far, although acknowledging the importance of collaboration, still pursue it in a position of dominance: it is the provider offering the content to the user; it is the most knowledgeable institution offering guidelines to the novice ones, it is the technological tools offered by the provider to support the learning process.

Although some initiatives do open up opportunities for the users to create and publish their own content, it is not the dominant discourse in the movement, and is not reflected in the structure of most websites. Most of the initiatives emphasise how the user can get hold of high-quality content but not how they could use the website to publish relevant content to a given community of interest. Although the discourse of collaboration is present in the conceptualisation of the OER movement, the practice shows that in this discourse there are other embedded discourses which shape the way in which collaboration is fostered. Most OER initiatives are based on the principles of...
The web 1.0 rather than the web 2.0. The former is based on the affordances of the web for making information available whereas the latter, besides that, also explores the potential of the Internet for the joint construction and dissemination of knowledge and information.

The practice of the OER initiatives lacks the emphasis on truly ‘empowering the users’, as in the Google and TiVo examples mentioned earlier. Rather, the concept of ‘empowerment’ has been used in a single-sided perspective, where the provider offers the user what they think is needed for them to be part of the knowledge society. In relation to this view, the extract below briefly discusses the content provision in the OER movement and how it lacks ‘regionalisation’:

“Many, if not most, content initiatives using ICTs tend to ‘push’ external content towards local communities. In other words, they mainly provide ‘access’ to other people’s knowledge. With a few exceptions, new technologies are not used to strengthen the ‘pull’ of local content from local people. Generally, the balance between ‘push’ and ‘pull’ – or supply and demand – is heavily weighted towards non-local rather than local content”

(UNESCO Portal, 2007)

There are other discourses embedded in the discourse of collaboration in the OER movement, and the relation between these discourses is called interdiscursivity, as argued previously. All discourses are constituted by other discourses. These discourses shape the social practices associated with them. In the case of the discourse of collaboration in OERs, the institutional discourse, the media discourse, the widening participation discourse and the globalization discourse are some of the many other discourses which work together shaping up the field. Below is an illustration of the institutional discourse working alongside the collaboration discourse in the movement.

3.2 The Institutional Discourse

| Extract 5: from MIT’s OpenCourseWare website |
|------------------------------------------------|
| The MIT OCW project aligns closely with MIT’s institutional mission (*to advance knowledge and education and serve the world*) and is true to MIT’s values of excellence, innovation, and leadership. |

| Extract 6: from the OpenLearn website – power point presentation introducing the project |
|------------------------------------------------------------------------------------------|
| OpenLearn…  
[...] Could be a way of building markets and reputation [...] |
The institutional discourses of both OER initiatives exemplified above are instantiated in their language in use and aim to justify their participation in the movement: OERs are aligned with their mission (extracts 5 and 6) while at the same time being beneficial to the image of their institutions and consequently to students recruitment (extracts 7 and 8). The institutional discourses in these extracts interplay with the media discourse of the institutions in the movement, which although not exemplified in this paper, plays an important role in shaping up the field. The media discourse of OERs draws on the globalization discourse and widening participation discourse to foster the image of the institutions, their mission and their role in the society in creating knowledge and a better world.

The institutional discourse in the OER movement is an example of a discourse in which the interdiscursive relations might become more apparent depending on the circumstances. To the OER user and to the broader society, it strongly draws on the discourses of widening participation and social inclusion, and highlights how open content can benefit society while at the same time being in alignment with the institutional missions. To a specialist audience, whose concerns also include issues of financial sustainability, it will draw on the media discourse and present the institutional benefits that being part of the OER world can offer in terms of raising institutional profiles. The interdiscursivity of the discourses is what enables them to create new discourses, contextualized in time and history. These discourses are not drawn upon on demand, but instead coexist and constantly shape the social practices in a field and are shaped by them. It is a cyclical relationship between discourse and practice.

When the discourses of widening participation and social inclusion are emphasised in the institutional discourse of an OER initiative, the discourse of flatness is also embedded in it. Widening participation means ‘flattening’ the opportunities for everyone, and Friedman’s book addresses this in a few places:

“There is no bigger flattener than the idea of making all the world’s knowledge, or even just a big chunk of it, available to anyone and everyone, anytime, anywhere.”

(Friedman, 2005:153)

“If someone has broadband, dial-up or access to an internet café, whether a kid in Cambodia, the university professor, or me who runs this search engine (Google), all
have the same basic access to overall research information that anyone has. It is a total equalizer […]”  

(Sergey Brin, in Friedman, 2005:152)

“Flattening the world means there is no discrimination in accessing knowledge”  

(Eric Schmidt, in Friedman, 2005:153)

This concept of access to knowledge being central to the OER movement reflects Foucault’s (1979) discussions of knowledge and power. In society, having knowledge means having more power to compete and to succeed. Power and knowledge are mutually interrelated: there are no power relations that do not also constitute a field of knowledge, and conversely, all knowledge constitutes new power relations (Foucault, 1979).

In the flattened world, knowledge means power. And in the OER movement, knowledge also means power – the OER discourses claim that access to knowledge enables wider participation in education and imply that, as a result, a wider range of possibilities for social inclusion will be created. The relationship between knowledge and power is an important notion for the understanding of social inclusion. This relationship is at the heart of social practices and also at the heart of the institutional discourses of OERs and of the so called flattened world. The question is whether access to information is really enough to level the playing field and to be a ‘total equalizer’, in particular in the field of education; and whether this information can be transformed into knowledge (via learning) and be recognised by the society in order to truly promote social inclusion.

4. The problem with flatness

Friedman (2005) introduces the concept of a flat world given the technological advances that allow for people to access information via the internet from anywhere, anytime. Appealing though it might be, the metaphor lacks a consideration of broader economic and cultural factors in relation to the use of technological advances to promote education for all. Abowitz and Roberts (2007) argue that Friedman assumes a congruence between market ideologies and larger civic aims:

“While Friedman does an admirable job laying out a complex series of social, economic, and political processes into terminology that everyone can understand, his simplistic image of a ‘flat’ world belies significant problems with his construction of civic life, schooling and justice. […] This moral vision, however, is dangerously naïve. It fails to consider the difficult contradictions of nationalism versus globalism, global capitalism versus ecological sustainability, and economic versus more broadly humanitarian aims for educational institutions.”

(Abowitz and Roberts, 2007, p. 478-479)
An evident fallacy of Friedman’s metaphor, which can also be found in the OER movement via the institutional discourse, is assuming that everyone can benefit from the perceived free access to knowledge on the web. There is no consideration of the resources and skills that are essential at the very minimum to benefit from OERs, such as the access to a computer connected to the internet and a level of computer literacy that would enable the individual to search for these resources on the web. And it is also well known that these minimum resources and skills are not available to all. Some communities in the developing world still lack basic resources for education, such as books, pencils and classrooms, let alone computers and skilled staff to deal with the machines and transform them into powerful educational resources. Removing the educational barriers by making information available on the web is not necessarily as straightforward as it might seem. Even if it is argued that what matters is the availability of content online for all who can access it, the localisation of content still is an issue to be tackled. Access to content is good, but access to content that is meaningful, didactic and localised could be even more useful for the ones who truly lack education opportunities. The offer of OERs by educational institutions on the web is valuable and could be a step forward towards levelling the educational playing field, but perhaps not the definite solution. Access to information is not the same as access to education. Not all potential users of open educational resources, for example, have the profile to be a self-directed learner. When the use of OERs is mediated by a tutor, other contingency factors come back into play – such as the availability of qualified tutors with access to a computer, who are then able to work through that content with their learners. OERs might have the potential to open up access to content to a number of learner profiles, but contrary to what the institutional discourse tends to portray, not necessarily to all of them.

5. Conclusion

This paper has brought together a number of different concepts: the metaphor of a flat world and the main components that can be transferred onto the understanding of the OER movement (open sourcing and in-forming); some of the discourses that are embedded in this metaphor (openness and collaboration, for example); how the discourses of OERs resemble this metaphor of a flat world; and finally, some of the discourses that constitute the discourses of the OER movement, such as the discourse of collaboration itself and the institutional discourses. Due to the interdiscursive nature of all discourses, I also consider some other discourses that are embedded in the discourses of OERs, although I have not focused on them in this paper (the discourse of widening participation, the discourse of globalisation, the discourse of social inclusion, and media discourse).

The aim has been to explore the potential of critical discourse analysis to identify these discourses and to offer a tool for the critical understanding of the shaping up of the field. CDA is a critical approach to data analysis and urges the researcher to take up a political stance on the discourses of the social practices. In the data presented, I drew on sample extracts from two institutions which are part of the OER movement. By no means are the discourses identified in the sample data exclusive to these two institutions: on the contrary, they serve as examples of dominant discourses in the open content movement as a whole, and if space had permitted, many other sample extracts could have been drawn upon. These institutions, in being part of the OER
movement and of a world that is said to be flat, draw on these available discourses that interplay in the field. Here is the cyclical effect: by drawing on these discourses these institutions (and others in the movement) are shaping the field, at the same time being shaped by these discourses. It is important to emphasise, however, that drawing on these discourses is not an intentional action. These discourses are what regulate the social practices and the language used to foster desired actions, and in this sense they are very powerful and subtle, because they can be taken for granted if not pointed out.

There has been discussion of the way in which the discourse of collaboration is present in both the flat world metaphor and in the open content movement. I also pointed to other discourses in the open content movement that relate to the concept of flatness, with a focus on the institutional discourses. The institutional discourses and their interdiscursive relations with other discourses allow for the discursive practices in the movement to be shaped according to the immediate needs of the context. For example, for the general user of OERs, the institutional discourses draw on the discourses of widening participation, social inclusion and on the ideal of creating a better world. For a more specialist audience, which also takes into consideration the financial sustainability of the OER initiatives, the institutional discourses of the initiatives draw on a business-oriented perspective of their educational enterprises, which can be found in the media discourse of the movement, supported by the potential of the provision of OERs to raise institutional profiles, leading to a possible increase in student recruitment. This discursive practice of the field, which aims to raise institutional profiles, is driven by the marketization of higher education in recent years and the increasing local and global competition for existing and new educational markets.

Within this scenario, a provisional answer has been found to the title question of this paper ‘The Discourses of OERs: how flat is this world?’ The educational playing field has not yet been levelled by the open content movement in the way that many people predicted. By analysing the discourses of the field, I point to some of the possible reasons: a) most OER initiatives are still based on Web 1.0 and take a one-sided approach to content provision, b) OER initiatives can draw strongly on institutional discourses that aim to raise profiles, attaching less importance to a commitment to offering true possibilities for knowledge building, its regionalisation and use/re-use by its potential audience, c) some OER initiatives might not have yet decided the position they would rather take faced with the various discourses and agendas of the field. These are the main factors pointing towards the conclusion that the world of OERs is not flat yet. Moreover, by reflecting on this point of view, two other broader questions can be raised: a) can it be? and b) should it be? The first question leads to the acknowledgement that for OERs to be real flatteners in education, other social barriers need to be dealt with – such as basic social inequalities and the huge digital divide between those who have access to technological resources and know-how and those who do not. The second leads to the reflection as to whether equal access for all to education is really desirable, or whether access to education should instead be driven by the specific needs of local communities to develop themselves and their immediate social environment. All these considerations call for a more realistic view of open educational resources and the acknowledgment of institutional forces to empower individuals within realistic boundaries.
CDA has allowed me to take a social perspective on some of the discourses of the OER movement, and it would also allow for further interpretations within this context if other discourses were to be analysed. I hope, however, that the initial evidence gathered here demonstrates the need for a more critical view of the field and its aims. Further research is necessary to identify and analyse in more depth these and other discourses of the open content movement found in other domains of practice, such as the blogosphere or even the interface designs of the initiatives. Further studies based on CDA would also allow a better understanding of the practices associated with the field and the ways in which these practices are mediated by discourses.

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References

Abowitz, K. and Roberts, J. (2007) The Fallacies of Flatness: Thomas Friedman’s *The World is Flat*, in: Journal of Philosophy of Education, Vol. 41, number 3, p. 472-481

Fairclough, N. (2000) *Discourse and Social Change*, Cambridge: Polity Press

Fairclough, N. (1995) *Media Discourse*, London: Edward Arnold

Foucault, M. (1979/1996) *Microfísica do Poder*, Rio de Janeiro: Graal

Friedman, T. (2005) *The World is Flat – A brief history of the globalized world in the 21st century*, London: Penguin, Allen Lane

Kress, G. (1990) Critical Discourse Analysis, in Kaplan, R. (ed) *Annual Review of Applied Linguistics*, Vol. 11, p. 84-99

Scollon, R. and Scollon, S. (2005) Lighting the stove: Why habitus isn’t enough for Critical Discourse Analysis, in Wodak, R. and Chilton, P. (eds) *A New Agenda in (Critical) Discourse Analysis*, Amsterdam/Philadelphia: John Benjamins Publishing Company, p. 101-117

Web resources

Creative Commons, [http://creativecommons.org](http://creativecommons.org), last accessed on August 20th, 2007

MIT OpenCourseWare, [http://ocw.mit.edu/index.html](http://ocw.mit.edu/index.html), last accessed on August 20th, 2007

MIT OpenCourseWare ‘How To’ page, [http://ocw.mit.edu/OcwWeb/HowTo/index.htm](http://ocw.mit.edu/OcwWeb/HowTo/index.htm), last accessed on August 20th, 2007

Moodle, [http://moodle.org](http://moodle.org), last accessed on August 20th, 2007
OpenLearn, www.open.ac.uk/openlearn, last accessed on August 20\textsuperscript{th}, 2007

UNESCO Portal, \textit{The need for local content}, http://portal.unesco.org/ci/en/ev.php-URL_ID=5463&URL_DO=DO_TOPIC&URL_SECTION=201.html, last accessed on August 19\textsuperscript{th}, 2007