Comparing Open Educational Resource Practices in Higher Education between Finland and South Korea

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In this paper we are comparing how the OER (open educational resources) are developed in Higher Education in Finland and South Korea. We also present a comparison model for further studies. Essential findings based on our comparison are that in both countries there are many best practices of use of the OER and open learning. Open educational resources have great potential and their use can ensure quality teaching and learning. The activity has not inspired the great mass of higher education teachers in Finland and Korea. Traditionally, a teacher's job is working alone, and so a new operational culture is required. Our comparison indicates that numerous questions, fears and problems and cultural differences are also related to the thematic. There is an evident need for a new kind of strategic leadership, a new kind of teaching and learning culture and a doing together and production ideology for the method to spread. Based on our study the following interlinked elements of OER seem to be pivotal: changes to pedagogies, technology and operational culture; educational policy intention; and attitude to culture. Lastly, comparison frame by OER practice model is developed.

Keywords : Open educational resources, Higher education, Finland, South Korea

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Introduction

Online learning and teaching has been a strategically significant focus of development in the Finnish and South Korean education systems. In particular, ICT skills, open access and open educational resources (OER) have been emphasized in national education strategies since the beginning of 1990. Although open access and open educational resources are high on the agenda of social and inclusion policies and supported by many stakeholders of the educational sphere, their use in higher education has not yet reached the critical threshold. In the Opal Report (2011) the researchers found that this has to do with the fact that the current focus in OER is mainly on building more access to digital content. There is little consideration of whether OER support educational practices, promote quality and innovation in teaching and learning. New innovative open educational practices are needed (Opal Report, 2011).

The many forerunners of open educational resources like MIT (Massachusetts Institute of Technology) in the USA (MITopencourseware, 2011; Bonk, 2009) are now entering a sustainability phase. However, according to The Horizon Report 2011 (Johnson et al., 2011) OER is the most significant developing target also in the future. The information will no longer be collected and shared – understanding, insight, and experience can be more valuable objects of exchange. For instance open-content textbooks can be customized, modified, or combined with other materials — and then the role of students is more important than the role of teachers. At the center of many discussions on OER are the challenges of sharing, re-purposing, and reusing scholarly works; related to these discussions are concerns about intellectual property, copyright, and student-to-student collaboration (Johnson et al., 2011).

In this paper, we will compare how the OER (open educational resources) are developed in Higher Education in Finland and South Korea and how OER should support educational practices, promote quality and innovation in teaching and

learning. The comparison model will be presented and further studies with various purposes suggested.

What are Open Educational Resources?

The concept of Open Educational Resources (OER) was introduced in 2002, when the Hewlett Foundation initiated the *Using Information Technology to Increase Access to High-Quality Educational Content* education program (Atkins et al., 2007). The intent of this program was to catalyze universal access to and use of high-quality academic content on a global scale. The description of Open Educational Resources (OER) by the Hewlett Foundation (Atkins, Brown & Hammond, 2007) is as follows:

> *"OER are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge."*

Butcher (2011) defines OER as follows:

> *"The concept of Open Educational Resources (OER) describes any educational resources (including curriculum maps, course materials, textbooks, streaming videos, multimedia applications, podcasts, and any other materials that have been designed for use in teaching and learning) that are openly available for use by educators and students, without an accompanying need to pay royalties or license fees."*

At the beginning the main focus was digital content: free access for educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for noncommercial purposes

(UNESCO, 2002, p.24). The main focus has been on building access to OER, building infrastructure, tools and repositories (Opal Report, 2011).

The objective has been to increase human capital, encourages content sharing among universities and free access to high quality content through OER. The information and communications strategies of various countries have emphasized the production of open educational material. For example, in Finland during 1995 – 2005, there was a focus on producing open high quality learning material and various portals were constructed through which material and courses could be disseminated for the use of various practitioners. In Korea, Edunet which provides educational contents free to teachers at K-12 is established by Korea Education & Research Information Service in 1996. Each country has directed abundant resources to the production of open content.

There have been many forerunners of open educational resources like MIT (Massachusetts Institute of Technology) in the USA (MITopencourseware, 2011; Bonk, 2009) and the forerunners are now coming into a sustainability phase. However, according to The Horizon Report 2011 (Johnson, Smith, Willis, Levine & Haywood, 2011) OER is the most significant developing target also in the future: *"The abundance of resources and relationships made easily accessible via the Internet is increasingly challenging us to revisit our roles as educators in sense-making, coaching, and credentialing".* The shift in OER is, however, increasingly movement away from open *content* to collaborative development (cf. Iiyoushi & Kumar, 2008), and social media tools, for example, provide good opportunities for this.

According to the Opal project (2011), phase two of OER is emerging in a way that learning experiences improve and educational scenarios are innovated. In this phase in OER development, there is a shift from a focus on resources to a focus on open educational practices. Phase two is characterized by the following aspects:

• Goes beyond access into open learning architectures
• Focus: learning *as* construction + sharing

• Quality improvement through external validation

• Change of educational cultures

• OER as value proposition for Institutions

In the future OER practices should support the reuse and production of OER through institutional policies, promote innovative pedagogical models, and respect and empower learners as co-producers on their lifelong learning path (Opal Report, 2011; cf. also Batson, Paharia & Kumar, 2008).

OER Examples/Cases from Finland

The Finnish higher education system comprises 20 universities and 24 universities of applied sciences. An important part of e-learning in higher education is the Finnish Virtual University (FVU), created in 2001 as a collaborative initiative of the 20 universities and The Finnish Online University of Applied Sciences (FOUAS), established in 2002 as a collaborative initiative of all 24 universities of applied sciences.

FVU and FOUAS serve regular students and lifelong learners and fulfill a variety of different functions – learning provider, academic network, technical service and laboratory for the development of ICT-based education. They have served as a collaborative forum for universities developing their e-learning approach. The basic idea has been to integrate the educational use of ICT in teaching and learning and produce open educational resources.

Each Finnish university has its own virtual university activity. They have an online education team comprised of teachers and e-learning experts that supports teachers' online teaching, helps teachers to produce their learning materials and tests various tools and methods. Most institutions also conduct research into these experiments and development projects. E-courses are offered at all universities and many institutions offer online degrees completed entirely over the web.

Funding for virtual university activities was more generally used on teaching ventures. These projects included designing e-courses and the preparation and publication of related learning material and collaboratively produced diverse learning material and courses. Teaching projects were implemented in faculties. Their pedagogic and technical implementation was supported through various systems, often as cooperation between universities. Staff development was a component of some projects. Investing in teaching is understandable, as this is a question of the basic function of universities. A critical question is how permanent a new education practice has been achieved. A considerable amount of staff training has been organized in universities and support services for online education developed. Development of support services included the planning of technical and pedagogic support and teacher guidance and instruction (Ministry of Education, 2007).

The Finnish Virtual University underwent an audit in 2007 and Online Education at Universities of Applied Sciences underwent an assessment in 2008. It was noted that five years of development had resulted in:

- some degree of permanency in operations

- integration of activities

- more student-centric activity

- greater course selection

- creation of digital learning materials

- reuse of learning materials

- organization of supporting services.

The audit indicates there are universities that have seriously taken on board the permanency of virtual education and invested in this, as well as universities in which, for example, the tenure structure indicates that little investment has been made to continue the virtual university's operations. We can talk of blended learning ICT in

teaching. Some universities have operated more systematically and further possibilities of ICT have been genuinely considered (Ministry of Education, 2007, Leppisaari et al., 2008).

Interesting pedagogic solutions and didactic practices were raised in the evaluation. These included various applications in an online environment that support students' expert cognitive processes and promote collective problem-solving skills. It is, however, necessary to continue developing pedagogic models for web-based education. It is especially important to develop the purposeful discourse of groups in which a collective knowledge base is constructed. The continuous enhancement of teachers' skills and in particular online guidance ability demands continuous resources. Students and workplace representatives need to be an integral part of the development work (Leppisaari at al, 2008).

There is no coherent model for the sharing, utilisation and implementation of OER. Each university develops its own practices. Similarly, there is no longer a coherent government funding program for development and each university develops OER in its own projects with various practitioners. With the use of social media becoming more widespread, individual teachers and student groups have engaged in pioneering work. Many universities have formed consortiums in which OER are further developed or teachers have formed peer teams, where they with social media tools collect reusable content and help each other's to find the relevant content.

The Metropolia University of Applied Sciences is the first Finnish university of applied sciences to have been accepted on the global OpenCourseWare consortium (OCW). OpenCourseWare was launched at MIT in 2002, when the university decided to release some of its courses under an open license on its website. Later MIT released all its courses online and the OCW project spread world-wide. About 200 higher education institutions from around the globe belong to the OCW consortium. The consortium's intent is to share its members' expertise to everyone in the form of freely available learning material. The material is disseminated online

through one common channel. Metropolia is a pioneer in the model's implementation in Finland.

Metropolia's open learning material is collected in a separate website to be released in fall 2011. The content will be licensed under an open license familiar from the computing world, meaning that anyone can utilize the learning material and make changes to it. Metropolia uses the Creative Commons license allowing free use of the material as long as the author is cited. Membership in OCW supports Metropolia's role as an open and adaptable learning community. The open sharing of learning material may help students to understand difficult issues better, as it is possible to freely access material drawn up from different topics on the OCW website.

OER Situation/Examples from South Korea

In South Korea, OER usage started first with the educational contents and materials for K-12 teachers by the government. And OER for higher education is followed next. In Korea the effort for OER is initiated apparently and funded by the government. Now leading universities both national and private joined this and support OER movement. Cases of Korean OER are presented in this chapter.

Korean Open CourseWare by KERIS

In South Korea, Keris (Korea education & research information service) has conducted KOCW (Korea Open CourseWare) since 2007 and started to provide national and international educational materials for higher education (http://www.kocw.net). The pilot service was started in December, 2007and the digital contents from national e-learning support center, cyber universities, and general offline universities are served. Such contents from TED, OER Commons, NIME,

LPRNET, edna, YouTube, Edu are also provided through the membership of GLOBE(Global Learning Objects Brokered Exchange).

Korean Ministry of Education, Science and Technology started a new projec t,' World Class University(WCU)' which invites Nobel Prize winners and world-famous scholars to domestic universities and give them chances to teach and re-search in order to contribute to the development of Korean universities. Eight hundred twenty five billion is invested in the invitations of 284 scholars for 5 years. Each scholar will stay in Korea for one year to teach and do the research. These international contents are uploaded on the KOCW from 2009 and most of the contents have the type of VOD (video on demand).

In Korea, there are 20 cyber universities which deliver all the lectures online and give students bachelors or masters degrees through distance learning. Even though each cyber university creates its own online contents, Ministry of Education, Sci-ence, and Technology provides funds for contents development through KERIS for cyber universities. Cyber universities can make proposals for this fund and KERIS select good ones to give development fund. This fund is pretty big to make excellent digital contents, which will belong to KERIS and shall be shared among cyber universities afterwards. The situation of KOCW is in the Table 1.

Table 1. KOCW Contents Service, Kwak, 2010

	Institution	Number of Institution	Number of Courses	Number of Teaching Material
Domestic	University	77	709	8,070
	World Class University	24	249	2,099
International	University or related institutes	40	489	616
	ARIADNE	1	-	4,800
	OER Commons	1	-	24,249
Total		143	1,493	39,834

Educational Digital Resources Bank by Education Broadcasting Service

Education Broadcasting Service in Korea started EDRB service, Educational Digital Resources Bank service (http://www.edrb.co.kr/main), which has the educational programs (contents) already broadcasted being stored in the type of clip and provides them to people free. These include EBS documentaries, learning contents, knowledge programs transformed into less than 5 minutes' video clips, images, UCC or eBooks. People who want to access these video clips, they just register their membership on the site and use them as they need. Even the user can use these clips in any educational context, leave any comment on them, and communicate with others in the community inside this site.

University's OER sites

Nowadays many universities are trying to open their excellent contents and share them on the internet. They create their own resource sites for open contents. The major universities in Korea successively opened these sites(see Table 2) for sharing knowledge for better social learning purposes.

Table 2. University's OER Sites

University	OER Url
Dongyang Mirae University	ocw.dongyang.ac.kr
Hanyang University	howl.or.kr
Korea University	ocs.korea.edu
Kyunghee University	ocw.khu.ac.kr
Seoul National University	ocw.snu.ac.kr
Sookmyung University	ocw.sookmyung.ac.kr
Sungkyunkwan University	icampus.ac.kr
Ulsam University	open.ulsan.ac.kr

For example, Hanyang University started its HOWL (Hanyang Open World for Learning) in 2010 which provided various educational contents for any person outside the campus as well as the students at Hanyang University. HOWL's concept for the educational outcomes is as follow (Figure 1). Knowledge Ecosystems is consists of HOWL's three steps of Achieve, Attract, and Access. And these steps are connected with Cs: co-evolution, co-creation, communication, collaboration, connection and crowd-sourcing.

Figure 1. HOWL's Knowledge Ecosystems (Brown, 2010)

Currently the participation for OER from the domestic universities is not so active. The main reasons are summarized as follows. First, the copy right issues and incentive issues are not clearly settled yet. Second, the appropriate sharing model is not constructed. Third, there is not an exquisite quality control system for educational contents. Fourth, since every institute uses different LMS, it's not easy to upload others' contents. The unified LMS or those with standardized source codes may be needed. Fifth, such contents for lifelong education targeted to common people are not many since most OERs are academic oriented ones provided by university professors. Some applied educational contents are to be developed sup-

ported for the common users.

Challenges of OER and Development Areas

Issues to be considered

Despite the positive visions and examples of good practices, OER thinking has not become widespread throughout higher education instruction. The development of open educational resources has proved to be very challenging and difficult to manage. There are numerous questions which concern teachers engaged in practical teaching work in both countries, such as,

- how can I be sure my material will not be plagiarized or used inappropriately,
- how am I recompensed for material I have created,
- how are individual student copyright issues handled when the entire group produces material,
- have I produced sufficiently high quality material,
- what is the attitude of my organisation to an open sharing of material,
- what is the best way to share material, and so on.

In Finland and South-Korea the greatest challenge in the use and production of OER is teaching arrangements and pedagogies (cf. Batson et al., 2008). This model of thinking is not suitable for traditional teacher-centric practice. If the starting point is collaborative production of knowledge, appropriate justifications for open educational resources will also be identified. Collaborative production of knowledge illustrates learning and activity in which interaction occurs through collective and mediating objects or artefacts, such as plans, reports, creative works or working on a development program. The motives for collective work are constructed through

collaboration: it occurs by explaining the development, writing, planning various stages, and having other participants read these, comment on them and develop further. The collaborative development of the objects requires the participation of individuals and a collective commitment to development (see Paavola & Hakkarainen, 2009; Hakkarainen, 2009 and e.g. Scardamalia & Bereiter, 2006, Engeström, 1987, Nonaka & Takeuchi, 1995). In Finland there are some good examples of the collaborative production on knowledge (Leppisaari et al., 2008)

Copy right issue in the development and use of OER is not defined clearly (Im, 2010). So intellectual property rights especially raise many questions, even though rather viable solutions have been found for these through the Creative Commons licenses (see e.g. Batsonet al., 2008). The publisher is able to explicitly define user rights to the material through licenses. Expert knowledge is required of the user to know which rights to the material are reserved and which waived. Even the most common Creative Commons licenses require expertise of teachers so that they do not unknowingly breach any law. Open content enriches teaching and learning so much that it is worth becoming familiar with licenses, and organizations should increasingly invest in intellectual property right education.

There has been a focus on teachers' production of their own material for many years in Finland. A more effective approach would, however, be the utilization of OER and recognition of right of use and only then the production of one's own material. Often the producers of OER have defined rights for further development of their material. The enrichment and collaborative development of existing material would ensure continuous quality assurance and collegial support. And this is one common philosophy of OER – collaborative doing and through this the production and maintenance of quality material.

Higher education management needs to be involved in supporting production and development of OER. The methods by which learning material are produced, e.g. do we profile as a producer of quality streaming videos or producer of podcasts, or is our expertized evidence as blogs or publications, need to be strategically se-

lected. Perhaps recorded lectures and the opportunity to return to them later are perhaps the greatest benefit to learners – this alone is one means to recruit students.

In Finland, only the Metropolia University of Applied Sciences has officially defined in its strategy that all learning material is freely available for the use of everyone. Other universities of applied sciences have only made recommendations, but no coherent strategic policies. The publicity of open availability forces teachers to continuously develop their own content and to ensure quality. On the other hand, open content constantly receives user feedback online and new suggestions as to how the content could be further developed. User-centrism ensures quality, users themselves provide the best hints on material modification.

Release of OER can also attract partners, businesses and organisations to produce new content and also contexts in which students can learn. Open content and technology facilitate a richer teaching and learning experience than was previously possible.

Trust and cultural factors

How can trust be built in the cooperative process of producing OER? The employment of open environments must recognize information security issues, privacy issues and immaterial property rights (IPR) (cf. Lewis & Allan 2005, 14, 163). The significance of the above issues grows as collaboration expands outside one's own organization to global cooperation.

Issues of trust emerged clearly during the virtual benchmarking project conducted during 2008-2009 (Leppisaari, Vainio, Herrington & Im, 2009). According to our study, the greatest barriers to constructing a virtual benchmarking project were establishing trust at individual and organizational levels, and cultural factors (cf. Peters & Manz, 2007; Lewis & Allan, 2005; Sobrero, 2008). These same trust factors are undoubtedly catalysts or barriers in production and development of OER locally, nationally, and internationally both from an educational policy perspective

and individual level (Lee, 2008). In activity based on virtual connections there is no time or possibility to build mutual trust in traditional ways. Our study showed that the *swift trust model* (Meyerson, Weick & Kramer, 1996; Peters & Manz, 2007) contributed a relevant perspective to the virtual benchmarking community. It is as if trust is assumed, a matter of will, from which participants set out on the collective process. Trust is established in systematic cooperation, in which the trust of others is gradually gained through discussion and working through issues together. It should be noted that OER is a particularly sensitive area of collaboration as it focuses on the use of educational implementations of colleagues and an evaluation of their quality.

Production of OER and the use of social media in education raise new kinds of copyright problematics. The practice requires opening up one's educational implementations, this of concern to many. What opening up means in this context, to what extent can a student's or teacher's work be shown to others, are issues that need consideration. There are problems in the public release of course implementations (open source, web 2.0), as public display of student work may not necessarily be possible, and educational organizations fear that content may end up in the possession of others. Permission to display a course must naturally be received from the appropriate organization. Restrictions arising from professional or organizational factors of trust must be recognized when considering how material produced by students is displayed to other participants (Lewis & Allan 2005, 163).

Model Development: Comparison Frame by OER Practice Model

As we presented the cases of Finland and Korea regarding OER situation, significant factors in comparison could be induced. These factors are common in those cases of two countries and meaningful for the practices of OER. For the desirable OER application, input, process, and outcome flow should be considered.

Such input factors include funding, legal aspect, and OER. Here OER is controlled by quality assurance mechanism. Legal aspect means licensing such as creative commons and others. Input factors also rights of individual teachers and organizations. Process factors include pedagogical usability. For the pedagogically appropriate practice, learning objectives should be established. When OER plays the role of pedagogical usability, OERs are shared, reused, or gone through the procedure of further development. Output factors include students' satisfaction and learning outcomes. Students' satisfaction and their outcomes are the result of the OER usage in the educational environment. This flow of the input, process, and output is leading the experience of learning toward lifelong education and social learning. This also facilitates learning community where people can interact each other for more effective learning (see Figure 2).

This OER practice model can be used for the comparison frame of OER usage. Any organization's or country's OER practices can be analyzed according to this model. This model may be used as checklists for good practices of OER.
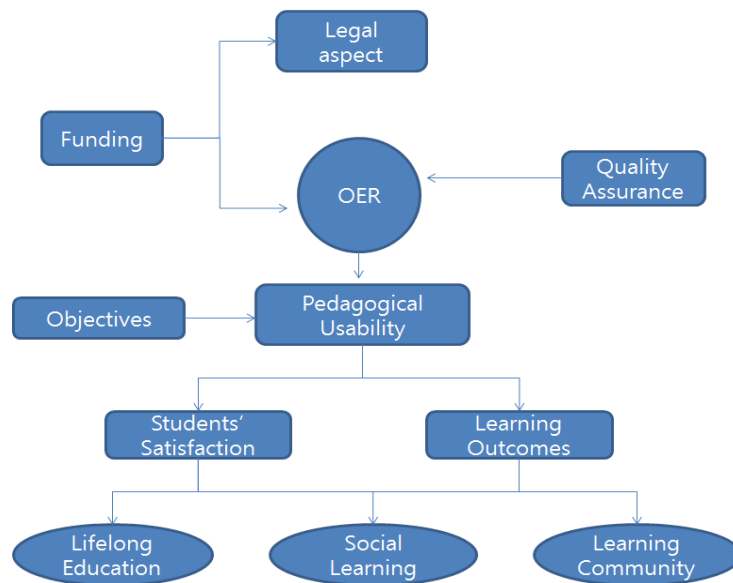

Figure 2. OER Practice Model

Conclusion

Open educational resources have great potential and their use can ensure quality teaching and learning. Around the globe, it is possible to identify excellent good practices and experiences in the production, sharing, use and further development of OER. However, the activity has not inspired the great mass of higher education teachers in Finland and Korea. Traditionally, a teacher's job is working alone, and so a new operational culture is required. Numerous questions, fears and problems and cultural differences are also related to the thematics - cultural differences are particularly great between organizations in the same country.

In the future information will no longer be collected and shared simply – understanding, insight, and experience can be more valuable objects of exchange. For instance open-content textbooks can be customized, modified, or combined with other materials — and then the role of the students is more important than the role of the teachers. At the center of many discussions on OER are the challenges of sharing, repurposing, and reusing scholarly works; related to those discussions are concerns about intellectual property, copyright, and student-to-student collaboration (Johnson et al., 2011; Batson, Paharia & Kumar, 2008).

There is an evident need for a new kind of strategic leadership, a new kind of teaching and learning culture and a doing together and production ideology for the method to spread. As such open contents environment as YouTube and Wikimedia accelerate the trend of openness and sharing, the educational contents meets the similar demand. And social learning activities can make this active. Real learning doesn't occur in the traditional classroom anymore, but collective intelligence with social learning will make more active and live learning experience for the 21st knowledge-based society.

Based on our study, the comparison model is induced with those factors of pedagogical usability, objectives, funding, legal issues, quality assurance, learning community, learners' satisfaction and achievement, social learning and lifelong educa-

tion. However, the following interlinked elements of OER seem to be pivotal, and significant for a more detailed comparison study of OER practices between Finland and Korea: changes to pedagogies, technology and operational culture; educational policy intention; and attitude to culture. Our further study will continue to examine these factors, use them to create a survey which will be sent to higher education teachers to clarify what factors promote production of OER and to analyze examples of successful cases from each country. Also OER's educational outcome will be investigated through users' perception and other methodology in order to figure out the better way of utilizing OER.

References

Atkins, D. E., Brown, J. S. & Hammond, A. K. (2007). *A review of the Open Educational Resources (OER) Movement: Achievements, Challenges, and New Opportunities.* Report to A William and Flora Hewlett Foundation. Available: http://www.hewlett.org/uploads/files/ReviewoftheOERMovement.pdf.

Bonk, C. J. (2009). *The World is Open.* San Fransisco: Jossey-Bass.

Batson, T., Paharia, N. & Kumar, M. S. V. (2008). "A Harvest Too Large? A framework for Educational Abundance". In T. Butcher, N. (2011). A Basic Guide to Open Educational Resources (OER). Edited by Asha Kanwar (COL) and Stamenka Uvalic´-Trumbic, UNESCO, *Commonwealth of Learning.* http://www.col.org/PublicationDocuments/Basic-Guide-To-OER.pdf

Engeström, Y. (1987). *Learning by Expanding.* Helsinki: Orienta-Konsultit.

Hagel III, J., Brown, J. S. & Davison, L. (2010). *The Power of Pull: How Small Moves, Smartly Made, Can Set Big Things in Motion.* NY: Baic Books.

Hakkarainen, K. (2009) *A knowledge-practice perspective on technology-mediated learning.* International Journal of Computer-Supported Collaborative Learning, 4, 213–231.

Herrington, J., Reeves, T., C., & Oliver, R. (2010). *A Guide to Authentic e-Learning.* New York: Routledge.

Iiyoshi, T. & Vijay Kumar, M.S. (Eds.). (2008). *Opening up Education.* Cambridge: The MIT Press, 89-103.

Im, Y. (2011). *Copyright issues in designing contents from the viewpoint of educational technology.* Workshop for vitalizing the usage of work (educational material) in cyber universities. Daegu, Korea: Korea Council for Online Universities.

Johnson, L., Smith, R., Willis, H., Levine, A. & Haywood, K. (2011). *The 2011 Horizon Report.* Aus tin, Texas: The New Media Consortium. Available: http://www.nmc.org/pdf/2011-Horizon- Report.pdf. Accessed 15.5.2011.

Keris (Korea education & research information service). (2011). KOCW (Korea

Open CourseWare). http://www.kocw.net. Accessed 20.6.2011.

Kwak, D., An, S., Kim, S. S, Kim, S. B, Ryu, Y., Park, I., Song, J., Lim, K., Jung, K., & Choi, S. (2010). *A Study on Vision Strategy for Ubiquitous Learning National System Construction*. Presidential Council for Future and Vision.

Lee, S. D. (2008). The Gates Are Shut: Technical and Cultural Barriers to Open Education. In T. Iiyoshi & M. S. V. Kumar (Eds.) *Opening Up Education*. Cambridge: The MIT Press, 47–59.

Leppisaari, I., Ihanainen, P., Nevgi, A., Taskila, V-M., Tuominen, T. & Saari, S. (2008). *Hyvässä kasvussa–Yhdessä kehittä- en kohti ammattikorkeakoulujen laadukasta verkko-opetusta.* (Growing well – Developing together towards quality university of applied sciences online education). Korkeakoulujen arviointineuvoston julkaisuja 4: 2008. (Published by The Finnish Higher Education Evaluation Council FINHEEC.) Helsinki. Available: http://www.kka.fi/files/ 384/KKA_408.pdf

Leppisaari, I., Vainio, L., Herrington, J. & Im, Y. (2009). Reflections on creating an international virtual benchmarking model for authentic e-learning: Crossing boundaries and breaking down barriers. In T. Bastiaens et al. (Eds.), *Proceedings of World Conference on E-Learning in Corpo rate, Government, Healthcare, and Higher Education.* Chesapeake, VA: AACE, 950–959.

Lewis, D. & Allan, B. (2005). *Virtual Learning Communities*. Berkshire: Open University Press.

Meyerson, D., Weick, K. E. & Kramer, R. M. (1996). Swift Trust and Temporary Groups. In R. M.

Kramer & T. R. Tyler (Eds.) *Trust in Organizations: Frontiers of Theory and Research.* (pp. 166–195). Thousand Oaks. CA: SagePublications.

Ministry of Education (2007). *The Evaluation of Virtual University Functions.* T. Aarrevaara, J. Stenvall, S. Saranki-Rantakokko, & A. Syväjärvi (Eds.) Reports of the Ministry of Education, Fin land 2007:48. Helsinki University Print.

MIT. MITopencourseware (2011). http://ocw.mit.edu/index.htm. Accessed

6.6.2011.

Nonaka, I., & Takeuchi, H. (1995). *The Knowledge-Creating Company.* How Japanese Companies Create the Dynamics of Innovation. Oxford: Oxford University Press.

OPAL (Open Educational Quality Initiative). (2011). Shifting Focus to Open Educational Practices. *Opal Report 2011* http://www.educause.edu/Resources/ BeyondOERShiftingFocustoOpenEd/224619. Accessed 15.6.2011.

Paavola, S., & Hakkarainen, K. (2009). *From meaning making to joint construction of knowledge practices and artefacts – A trialogical approach to CSCL.* In C. O'Malley, D. Suthers, P. Reimann, & A. Dimitracopoulou (Eds.), Computer supported collaborative learning Practices: Proceedings of the 9th international conference of Computer Supported Collaborative Learning, Volume 1, 83–92. International Society of the Learning Sciences.

Peters, L. M. & Manz, C. C. (2007). Identifying antecedents of virtual team collaboration. *Team Performance Management* 13(3/4), 117–129. DOI 10.1108/ 13527590710759865

Scardamalia, M. & Bereiter, C. (2006). *Knowledge building: Theory, pedagogy, and technology.* In K. Sawyer (Ed.) The Cambridge handbook of the learning sciences.(pp. 97 – 115). Cambridge, MA: Cambridge University Press.

Sobrero, P. S. (2008). Essential Components for Successful Virtual Learning Communities. *Journal of Extensions* 46(4). Available: www.joe.org/joe/ 2008august/a1.php

UNESCO. (2002). Forum on the impact of open courseware for higher education in developing countries. *Final report.* Paris: UNESCO.

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