

Adaptability as a Special Demand on Open Educational Resources: The Cultural Context of e-Learning

Thomas Richter [thomas.richter@icb.uni-due.de]

University of Duisburg-Essen, Department Information Systems for Production and Operations Management, Universitätsstr. 7, 45141 Essen, Germany [<http://www.wip.wiwi.uni-due.de/en>]

Abstract

Producing and providing Open Educational Resources (OERs) is driven by the concepts of openness and sharing. Although there already are a lot of free high-quality resources available, practitioners often rather rewrite learning resources than creatively embed (and thus, reuse) existing OERs. In this paper, we analyse the reasons for this in two different educational contexts. As a result of this analysis, we found that the uncertainty on possible adaptation needs is one of the major barriers. In order to overcome this barrier and make different learning contexts comparable, we analysed the context of learners and in particular, in the research project 'Learning Culture', we investigated the field of culturally motivated expectations and attitudes of learners. This paper shows the results of this research project and discusses which cultural issues should be taken into consideration when OERs are to be adapted from one to another cultural context.

Keywords: Open Educational Resources, e-Learning, Adaptation, Internationalization, Culture, Learning Culture

List of topics

- Introduction
- Prior research
- The e-Learning context – general view
- The cultural context of e-Learning
- The learners' cultural context
 - The scope of the survey results
- Discussion of the results from the bi-national comparison
 - The role of the professor/lecturer
 - Tasks and responsibilities of the professor/lecturer
 - Feedback
 - Motivation
 - Group work related issues
- Conclusion
- References

Introduction

Producing and providing Open Educational Resources (OER) is driven by the concepts of openness and sharing (Atkins et al. 2007, p.5, p.27; Conole 2012). In the context of this paper, OERs are understood as digital educational resources that are free to copy, distribute, modify and republish. Reusing those educational resources in an even slightly different educational context than the original one, such as another school with a different kind of educational policy, requires evidence that they are appropriate for the targeted educational scenario. As long as at least the national context keeps the same, later users (e. g. educators, learners) can take this decision by doing a quick visual examination of the learning resources (Richter 2010). But what happens when OERs are to be adapted from other national contexts?

There is a high potential related to OERs, not only within the developed countries but particularly also in terms of foreign aid: D'Antoni (2008, p.8) is of the opinion that OERs could play a central role in overcoming the educational gap between northern and southern countries in the world. Particularly in less developed regions with a low population density (where, e. g., in lack of learners, appropriate classes cannot be built), she argues that e-Learning could be the solution to educate pupils and properly prepare them for a later higher education. According to D'Antoni, OERs could also help overcome economic barriers. In this respect, Easterly (2005) writes that since the 1960s, there have been many successes in

enrolling educational programmes that have been made in the context of developing countries, but still, learning contents are missing (p.8). Schmidt (2005) is of the opinion that a successful implementation and reuse of already existing educational resources in a global setting strongly requires taking the context of the learners into consideration. Woolman (2001, p.30-31) criticises that most educational material is not designed to foster the development of national identities and does not take cultural diversity into consideration. Thus, adaptability is to be claimed as a special demand on OER: If reusability is the primal focus of a concept of openness, without being adaptable, the contextual radius in which OER can be reused is extremely limited. The OpenCourseWare Consortium (Atkins et al. 2007, p.20) highlights the special role of 'adaptability of OERs' as they define it as the first of special goals for future demands: '*Extend the reach and impact of open courseware by encouraging the adoption and adaptation of open educational materials around the world.*'

The purpose of this paper is not providing a general solution on how to conduct the adaptation process. As shown in Richter (2011), adaptation itself is a highly creative process, because the necessary single steps of the adaptation process are strongly depending on the type of resources and on the related contexts – a general solution does not exist. Instead, this paper aims to foster creativity by sensitising learners, practitioners, and policy-makers on contextual (particularly cultural) aspects that critically affect the successful reuse of educational resources in general and OERs in particular. In terms of creativity, Wallas (1926) speaks of the stages 'Incubation' and 'Intimidation' (see Conole 2012, chapter 6) which, in his opinion, are the preparatory stages to develop creativity: Before a creative solution can be found, a problem first needs to be understood so that a feeling for a solution can be developed. Once the problems of unknown differences between learning contexts (and thus, adaptation needs) are understood, educators can develop creativity in adopting already existing OERs to their specific educational scenarios instead of rewriting contents. Learners, on the other hand, by raising the number of alternative but still appropriate viewpoints, can more successfully find creative solutions that support their individual learning success. After briefly introducing some relevant pre-studies, results of our bi-national survey on cultural aspects of learners' attitudes and behaviour are presented and discussed.

Prior research

In March 2010 we conducted a study on teachers from different school-types in Germany (Richter & Ehlers 2010), asking them in group-interviews to discuss their Open Educational Practices. Open Educational Practices (OEP) are defined as '*practices which support the (re)use and production of Open Educational Resources (OER) through institutional policies, promote innovative pedagogical models, and respect and empower learners as co-producers on their lifelong learning path*' (Ehlers 2011). The study revealed that the German teachers, on the one hand, would like to use much more OER to enrich their lectures but on the other hand, they are afraid of confronting their learners with maybe inappropriate or incorrect contents. All of the German teachers said that even if they can ensure the contents are correct, they fear to fail when determining the adaptation needs and proceeding the adaptation. They stated that they urgently need a list of particularly cultural issues they should take into consideration within the adaptation process. Taking the resume of this survey, the basic barriers on using OER in German schools are a lack of trust and the inability to determine possible adaptation needs.

The Open Quality Initiative (OPAL [URL: <http://www.oer-quality.org/>]) revealed similar findings in the fields of Higher (HE) and Adult Education (AE) in European Institutions. OPAL is an European Lifelong Learning project (LLL) with seven European partners, supported by the European Commission. We realised that on the one hand, there is a large number of highest-quality OER available and accessible, but on the other hand, still, a critical threshold in using/reusing OER seemed not yet being met. The aim of the OPAL project was to determine the reasons and providing tools/mechanisms that foster/encourage the use/reuse of OER. Major barriers identified included the lack of trust into the quality/appropriateness of OER, as well as not being able to determine adaptation needs.

In both cases, one major barrier to use/reuse OER in the own educational process was uncertainty over which aspects needed to be taken into consideration to decide, if an adaptation is necessary (and when/what to adapt). In a large-scale desk-research on the context of learning (in general, not limited to OER), we determined lots of possible reasons for conflicts in learning scenarios (Andrade et al. 2011) that, depending on the particular scenario, need to be taken into consideration. Some of those aspects were related to the learners' experiences and expectations and particular, to their culture. In this context, first of all, we wanted to find out which particular skills are relevant for learners to successfully participate in e-Learning based educational programs.

With this in mind, we conducted a Delphi-study (Richter & Adelsberger 2011). The principle of a Delphi Study is to interview experts on a certain topic, extracting the different types of answers in a list, and asking the same experts to evaluate the single aspects by relevance (Weßel 2010). For this particular study, sixteen e-Learning experts (HE/AE) from Germany, Austria, and Switzerland agreed to participate. We carried out semi-structured telephone-based interviews with each of them. In the next step, the results were combined into a list of 29 key-aspects. The experts were asked to evaluate each issue regarding its impact depth on a scale from 0-6. The highest ranked (80+/96 points) issues exclusively focused on the self-learning process (self-motivation, self-organisation, personal initiative, and self-discipline). In the middle field (60-79/96 points), mainly technical issues were focused on, such as Internet competences, media-competences, and

computer literacy, but also, aspects related to group work (mediation competences, ability to stand critics, competences for communication). The lowest ranked section (35-59/96) referred to cultural demands like 'openness for cultural diversity' (49/96), 'English skills' (44/96), and 'cultural competency' (43/96). We wondered why all skills having to do with international/intercultural environments were ranked so low. After asking some of the experts in a third round, they stated that international/intercultural environments are considered to be too complicated to understand and to deal with, so they limit their programmes to nationally or at least culturally homogeneous participants, indeed most teach in German (Richter & Adelsberger 2011, p.1601-1602). In conclusion, even though the contents were self-produced, the uncertainty on the impact of cultural diversity leads providers of e-Learning to limit their offer to contextually/culturally fully understood scenarios. It seems the adaptation-problem is not limited to OER but is a more general issue. In contrast to the context of OER, here, the resources were fully known, but still, the adaptation process was considered to be an unmanageable task.

The e-Learning context – general view

In the meaning of this paper, the learning context, as a whole, consists of any aspect affecting learning scenarios that cannot be influenced by the learning design. Firstly, we analysed the literature for documented conflicts in intercultural/international learning scenarios on a general level. We analysed the results of our desk-research on possible reasons/sources for the conflicts. Such conflicts were caused by the specific characteristics of the involved entities, which on the one hand are the actors themselves and the societal context they belong to (displayed in the centre of figure 1). We grouped the single determined influence factors (reasons for conflicts) by topic within influence factor classes (the entities, displayed in the outer ring of figure 1). We found out that aspects from various fields were involved, such as history, politics, technical infrastructure, or the legal system within a country. Note, that those classes need to be understood as container-structures: The class 'Technical Infrastructure' includes aspects like the average hardware type in private households, the divide of high-speed Internet within a country, in average used type of mobile technologies, and its divide within a country. All those aspects may cause conflicts sides the learners. Still, there are yet not fully understood cross-effects between the single influence factors that when accumulating, seem to differently affect (than single occurring influences) the learner's reactions. At this point, further research is needed.

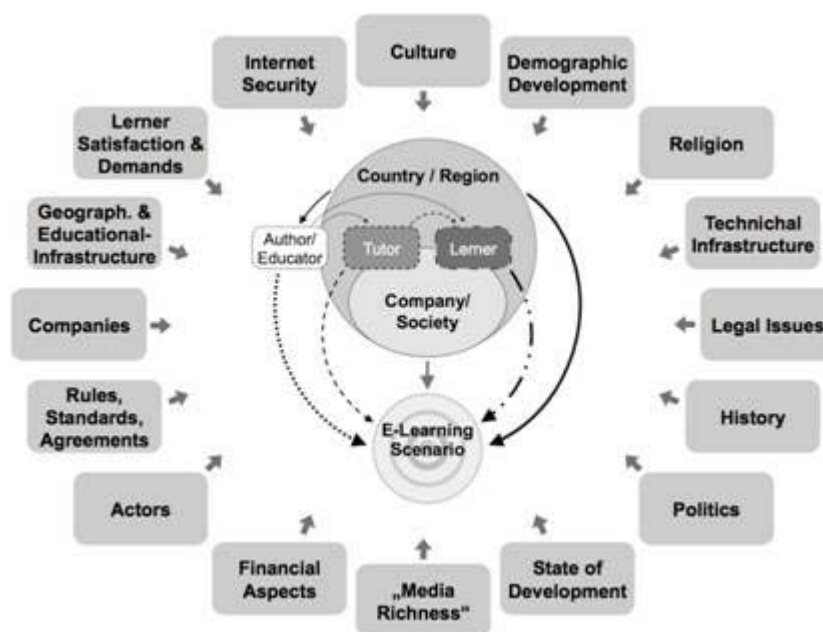


Figure 1: The context of e-Learning (Richter 2010, translated to English)

Depending on the resource type and the actual context of reuse, all those data (from origin and own context) can be necessary as background information to decide which aspects are to be taken into consideration when adapting OERs that originally have been designed for other contexts. However, we have found out that in a lot of cases, just a small number of aspects actually are relevant (Richter 2011). Some of the potential problems with adaptation processes could be solved by the design of the OER: When we, e. g., look at the technical infrastructure within a country or region, it is very discouraging for an educator or learner to realise that after a long search for a thematically possibly fitting resource, the found resource cannot be changed in its format or content. Olaniran (2007, p.26) writes, *there are significant portions of the world population that never made a phone call or used the Internet*. In terms of OER and derived from this particular influence-factor, if the contents indeed shall be reused in different contexts, minimum technological requirements should be described, the format should be changeable, and a printable version of the learning resources should also be provided.

When analysing the single influence-factors, we found out that once aware of the context, for most

(developed) countries, it is quite easy to collect a lot of the required information from the Internet: The information already has been documented in the one or the other context. A very different situation revealed regarding those influence factors that were related to the cultural background of the learners, their experiences and expectations.

The cultural context of e-Learning

Conflict scenarios, where the literature allowed the suspicion on a cultural background have further been analysed and operationalised for our questionnaire 'Learning Culture'. After conducting some sets of test-studies and improving the quality of the questionnaire, the questionnaire has been standardised: From the almost 140 items we started with in the test studies, 102 items (including test-items and some personal data) remained for the finally standardized questionnaire.

In order to use the questionnaire, we had two basic research questions to answer: Firstly, we needed to know, if the supposed cultural aspects really had a cultural background or else, turned to be individually different. Secondly, we had to verify the scope of our results. A basic question was, which society's culture influenced the learners most (national-, university-, faculty-, company-culture) and thus, if e. g., having collected data from university students, are those also valid for learners in the context of professional education? There is a broad discussion in the literature on a general level, if national culture or different subcultures may be relevant to determine cultural aspects in concrete scenarios. Particularly countries in which different languages are spoken also promise different cultures (Leonardi 2002, p.314). Instead of taking the position of the one or the other side, we wanted to have evidence.

The outcomes of the questionnaire were not limited to describing the learning culture of learners within a single context but more they needed to serve for comparison of two or more contexts in order to determine possible adaptation needs. Thus, in addition to Germany, we needed a country, that is suitable for a direct comparison. South Korea promised to be an excellent candidate for a comparative data-set to Germany in terms of a pilot-study to evaluate the questionnaire itself: As much as Germany, South-Korea has a quite homogeneous culture (Müller et al. 2000), it has a similar technological standard (it is a bit higher than in Germany), and throughout the country, a single language is used. Further, according to our own practical experiences (we are working on the implementation of a Dual-Degree master programme in Information Systems with a South-Korean university), at least the national cultural context in South-Korea promised to be different enough to the one in Germany, so that we expected receiving clear results. Clear results are needed in order to validate our suspicions on the cultural background of the single items and show the value/usability of the results in general. The questionnaire was conducted in each country's national language, German and Korean.

In Germany, we implemented the questionnaire in its online-form to all students in three randomly chosen Universities (1817 samples in total, response rate in average 3-5%) and seven explicitly chosen companies (ca. 80 samples / 8-16 samples from each company; response rate 32-64%). In the German context, we particularly focused on the scope of our results. In the German universities, we asked each administration-unit to support our (anonymous) survey and send a mass-mail to all of the students, inviting them for participation. In each of the companies, our online-survey was (internally) sent (by the local administration) to a maximum of 25 employees. It is unclear how those have been chosen. Although the participation rate in the companies was much higher than in the universities, in total, the number of responses was too low to understand those results as being truly representative (different to the university results where the number of results was high enough). In South-Korea, we limited our invitations to university-students in order to receive comparative contextual data: Because of legal issues, the South-Korean universities refused to send mass-mails to all of their students. In order to reduce the risk of subjective influences when selecting our samples, we used a Random-Route algorithm (Kromrey 2006, pp. 309-310): As a multilevel technique, the Random-Route algorithm helps avoiding the subjective influences of the questioner when selecting participants for a survey in a face-to-face environment by predetermining multiple conditions. We entered several subway lines in Seoul in predetermined entrances and wagons and asked all passengers within the current wagon if they are students and if they at least need to wait for further seven stations (the time, needed to complete the questionnaire). If both answers were positive, we invited them to participate in the survey. As we were unable to provide any valuable incentives, the response rate was just around 10%, although using the paper form in a face-to-face scenario.

Within the questionnaire, the single items were presented as statements, which had to be evaluated by the students on a four-point Likert-scale (Likert 1932). By not providing a neutral middle-position, we wanted to avoid that participants abuse this middle-position in terms of not wanting to decide or wanting to quickly finish the survey. However, the questionnaire was designed with the German cultural context in mind, and there was a chance that the one or the other question did not apply to a different context (e. g., the concept of a tutor is unknown in South Korea). In such a case, forced-choice questions (Lenski & Leggit 1960) could have led to an unwanted distortion of the results (Garland 1991, p.70). Thus, we provided an additional option on the right side of the scale (figure 2) to indicate that a question does not apply to the specific context. We departed this option a bit from the other options. This method worked well: The fifth option rarely was used by more than 1% of the participants.

5. 전문 영역
어떤 방식의 피드백을 선호하십니까?

	매우 동의한다.	대부분도 동의한다.	거의 동의하지 않는다.	전혀 동의하지 않는다.	평가 기준에 맞지 않습니다.
1. 알고 들었는지를 직접적으로 알려주는 구체적인 표현방식 외 피드백을 선호한다	0	0	0	0	0
2. 개선 방향을 알려주는 방식의 간접적인 피드백을 선호한다 (순환적/간접적 피드백)	0	0	0	0	0

Figure 2: Excerpt from the Korean questionnaire.

In the literature, there is no overall definition of the term ‘culture’ available (Kroeber & Kluckhohn 1952). Depending on the disciplines’ perspectives, it’s ‘content’ varies: In some definitions, politics, legal system, and religion are understood as cultural aspects, in other definitions, culture is limited to social issues. Researchers in the fields of anthropology and philosophy discuss whether culture generally is a concept, we should believe in or use, since it may be inappropriate to classify people or societies (Walters & Bird 1987). What most definitions of culture finally have in common is that culture is something that is learned, not static, believed by a majority within a society, intuitively or consciously influencing the actions of the members of a society. In the meaning of culture as a common sense, we decided to adapt the concept of culture as a set of attributes (values, rituals, behaviours), the majority of people within a certain society believe in (Geertz 1987, p.261). We did not believe in national culture but much more, expected major differences between specific learning scenarios (such as, adult an/or higher educational sectors).

To validate the cultural background of each questioned item from our questionnaire (learning) within a certain context, we assumed that at least 60% of the respondents had to decide for ‘fully agree/somewhat agree’ (positive answer) or ‘somehow disagree/disagree’ (negative answer). When interpreting 50% as an equal distribution and thus, an indicator for no cultural background but individually taken decisions, 60% still is a weak indicator but however, it defines a clear majority. There is no characteristic number in the literature available that is significant for a cultural background of a certain aspect (e. g. attitude). One reason is the usual perspective in culture research: A certain aspect is assumed being related to culture. The specific shape of this aspect in a certain context is investigated (Handwerker 2002, p.108).

As for the results on the scope of our survey, regarding some questions, significant differences between each company’s context and between the company-context and the university-context have been found. Due to the small number of responses we received from the companies, the corresponding results cannot be understood as being representative. However, the scope of the results, collected from university-students needs to be limited to universities. The results from the companies justify a larger scaled investigation, which may be done in the future.

The learners’ cultural context

General cultural aspects often are intuitively recognized by practitioners as being different to the own context when analysing learning resources from foreign contexts on possible adaptation needs (this is the case when wanting to reuse OERs). Such are, e. g., the used didactical concepts, the visual design of resources, the usage of culture-related symbols or heroes/anti-heroes, and the used language. However, learning designs directly related to specific types of learners in their local cultural context are not understood well enough to be taken into consideration. In our research project ‘Learning Culture’ we focused on such aspects. As the project finally showed, the cultural context of the learners is mainly related to their expectations and attitudes. Most impacting, in terms of e-Learning, were the following issues:

- the role of the professor/lecturer
- tasks and responsibilities of the professor/lecturer
- feedback
- motivation
- gender issues
- group work.

For every issue listed above, we wanted to know, if concrete attitudes and expectations (cultural influence factors) have a cultural background and therefore, can be generalized within certain learning contexts. As well the issues as also the concrete influence factors derived from the upper introduced Delphi-study as also from the literature research on conflicts in learning scenarios. In table 1, those results from our university students survey are displayed (by the overall percentage value in each context) which turned out to surely have a cultural background in at least one of the investigated national contexts. The results of our research are displayed by naming the item itself (topic/question) and the validation status of the cultural context in both investigated countries, Germany and South Korea. Average positive answers are displayed by the suffix (p) and negative answers by the suffix (n). In some cases, slight differences between the faculties of the universities have been found. Those have been small enough to be ignored in this papers’ context. For reasons of clarity, in table 1, negative results have been highlighted in light-grey colour:

Table 1: Validated cultural influence factors in the context of learning scenarios

Attitude/Expectation	Germany	Korea
1. Role of the lecturer		
Expert	99.56 (p)	95.97
Personal coach	eq. distribution	77.42 (p)
Respected person	74.08 (p)	eq. distribution
Unfailing person	69.68 (n)	75.81 (p)
Public figure	68.79 (p)	eq. distribution
Trusted person	eq. distribution	81.85 (p)
2. Tasks and responsibilities of the lecturer		
Provide technical support	65.66 (n)	81.85 (p)
Provide preselected contents	97.69 (p)	84.27 (p)
Support the organization of the learning process	eq. distribution	84.27 (p)
Support individual information research	eq. distribution	84.27 (p)
Evaluate results, knowledge, development	71.77 (p)	88.31 (p)
3. Feedback		
When given: directly	77.38 (p)	82.26 (p)
Situation to give feedback: Item related	84.31 (p)	64.92 (p)
Situation to give feedback: Task related	70.83 (p)	81.85 (p)
Transmission code: Give feedback in presence of others?	68.02 (p)	eq. distribution
Content: clearly point on errors	84.98 (p)	78.63 (p)
Content: show, how to do it better	98.57 (p)	80.65 (p)
Content: show errors and explain why it was wrong	97.74 (p)	89.92 (p)
Content: show errors without explanation	82.55 (n)	82.66 (n)
Content: show errors, explain and show, how to do it better	97.14 (p)	89.92 (p)
Laud positively effects my motivation	95.60 (p)	96.37 (p)
Critique positively effects my motivation	63.24 (p)	86.69 (p)
I am confused if not receiving any feedback	79.14 (p)	73.39 (p)
4. Motivation		
I easily can be motivated by persons	88.61 (p)	84.68 (p)
<i>Learning is motivating for me if the content/the achieved knowledge...</i>		

... is useful for my life.	96.37 (p)	92.34 (p)
... effects my personal development.	90.59 (p)	90.73 (p)
... raises my chance on the job-market.	81.12 (p)	77.02 (p)
... can be chosen by myself.	82.00 (p)	66.53 (p)
... urgently is needed for exams.	63.68 (p)	81.45 (p)
... is demanded by the lecturer/professor.	63.18 (n)	56.85 (p)
<i>In case, a (sub-)task appears unmanageable to me and I turn to loose my motivation, I ...</i>		
... make a break and get back on it, later on.	76.77 (p)	88.31 (p)
... give up and let the complete task unsolved.	75.73 (n)	72.18 (n)
... look for support, e.g., literature or a person.	92.24 (p)	80.65 (p)
... focus on other things and get back later on.	83.54 (p)	66.94 (p)
... just solve the manageable parts.	67.25 (n)	90.32 (p)
... focus on the manageable tasks (if I come back to the difficult ones, I decide later).	66.10 (p)	80.24 (p)
6. Group-Work (GW) related issues		
<i>I believe, GW is efficient, because ...</i>		
... GW is an adequate scenario to discuss problems.	81,01 (p)	89,92 (p)
... other opinions help me deepening my understanding.	79,20 (p)	91,94 (p)
<i>GW supports my own learning process in terms of ...</i>		
... consolidating the learning contents.	76.55 (p)	99.19 (p)
... doing case-studies.	68.30 (p)	99.19 (p)
... learning and understanding basics.	eq. distribution	99.19 (p)
... memorizing.	75.67 (n)	99.19 (p)
<i>Group building process: How do you choose members for your group?</i>		
Sympathy	86,96 (p)	80.24 (p)
Students who showed engagement before	85,69 (p)	85.48 (p)
Students with a deep understanding on the subject	65,60 (p)	89.52 (p)
I avoid repeating bad experiences	79,32 (p)	77.82 (p)
There are no special demands	72,32 (n)	62.90 (n)
I do not build up groups by myself	66,26 (n)	60.08 (p)
<i>Evaluate statements:</i>		

A GW-task should be dividable into subtasks.	67.94 (p)	77.82 (p)
A GW-task is to be collectively solved.	eq. distribution	77.42 (p)
In GW, I defend my own opinion.	91.85 (p)	78.23 (p)
<i>Group-Work Evaluation</i>		
I prefer an evaluation of my individual part	62.69 (p)	76.21 (p)

The scope of the survey results

This topic shall not be focused in this paper but the results need to be outlined. Comparing the results of the companies with each other, and of the companies with the universities, we found significant differences between the learning cultures. Comparing the results from the German universities with each other and the faculties within a single university (the results of a single university allowed this investigation) just showed small differences. Thus, we can assume that we cannot generalise the results to all learners within a national context, even not, if the context is considered being culturally quite homogenous. However, it seems that in a culturally homogenous context, we can extrapolate the results received from university students to all university students in that specific context.

Discussion of the results from the bi-national comparison

Although the two chosen learning contexts de facto are quite different, regarding the questioned items, there have been just a little number of remarkable differences, which in the following are to be discussed with a view on the adaptation of OERs. As a basic precondition, it is assumed that the OERs are available in a language, the students understand.

As for the following discussion, please note that not all found contextual differences necessarily lead to changing needs. However, the aspects should be taken into consideration by the educator/author/provider when determining possible adaptation needs. If the related differences between the contexts could disturb the learning process of the targeted learners, an adaptation is recommended.

The role of the professor/lecturer

This section of the survey focused on the understanding of learners of the educating staff. For e-learning, this mainly plays a role in programmes where a direct contact between educators and learners is part of the learning design. However, also the fact that a certain kind of educator designed the contents may play a role regarding the students' way to understand the contents. As for the results, the South Korean (in the following just 'Korean') students understand a professor as an almost inerrable expert and a highly trusted person. Among the German students, the professor is much more understood as a person of public life with an expertise that legitimates him or her to teach. The German students would never expect their professors to know everything or even be an inerrable person. Different to that, in the Korean tradition, it is extremely impolite to put the professor into question. In the German context, critical thinking about the learning contexts is expected from the learners. Different to that, and completely unusual for German students, in Korea, multiple-choice tests often are provided which consider the correct answer being the one that repeats the taught contents in wording. In the context of OER this differences play a minor role regarding the reuse of the simple structured resources (such as a single slide). Maybe, when reusing German OERs in Korea, which were originally designed to be critically read or interpreted (e. g. by providing provocative statements) a related comment would be strongly recommended. Further, the Korean students may not naturally understand sarcasm or irony. When adapting completely designed programs/courses, in which examinations are involved, further changes could be required. When programmes are designed for group-work or mentoring, adaptations could also be needed, although particularly in the least case, it is expected that the educators then provide the locally common way of education. How far an adapted resource inherits the authority of the local supervisor (because it has been recommended) is unclear.

Tasks and responsibilities of the professor/lecturer

This section of the survey deals with expectations, learners have regarding the services an educator may provide. In case of OERs, the services a course offers (besides providing the learning content) are touched, e. g., to what extend the resource supports possible technological challenges. Regarding the personal relationship and expectations, traditionally, in Korea, university-professors have a much closer

relationship to their students. While the German students expect their professors just to tell them what to know and to evaluate their outcomes, the Korean students expect individual support, such as helping them to find appropriate literature, to organise their learning process and also, to give technical support. In case of reusing OER-courses, this difference could lead to major irritations, in terms of the learning content, when a Korean student works with German courses: He/She may feel being abandoned if there is no opportunity for further assistance in case of not understood items. The German students, reusing OER-courses from the Korean context, may get more support than they expect: If there is a linear learning design, this may be understood as being slowed down in their learning pace. A useful adaptation would be a change to a non-linear design where those students who are in need of further assistance, can take it while others can switch to the next topic. In terms of technical issues, German students are used to solve their problems themselves, using a try-and-error strategy. Korean students may feel better if in case of possible technical problems (e. g., during the installation process) a helping functionality would be available.

Feedback

Again, from the perspective of the learners, in this section of the questionnaire, students are asked for their preferences regarding the point of time, when feedback is to be given, the type of feedback (laud/critique), the transmission code (if just directly or also within groups), and if giving feedback which information should be included. In terms of e-Learning in general and OER in particular, there are two basically different scenarios for feedback to be distinguished: The feedback directly given (face to face or within group situations) by an educator, e. g., by using e-Mail, chat, a forum, voice-services, and the feedback, automatically given by the application itself. Regarding the adaptation of OERs, the first case does not need to be discussed in particular because direct supervision given by local educators should be culturally appropriate by nature. After a short summary of the general outcomes of the bi-national study, herein, possible effects for the case of automatically given feedback is focused. The students from both contexts generally wish to receive (both, laud and critique) feedback. While the German students prefer item-related feedback, the Korean students ask for task-related feedback. This difference lies in the different educational concepts: In the Korean context, the (seemingly) best possible solution for a concrete problem is taught by defining concrete steps. If those steps are properly taken, the result is expected to be appropriate. Thus, the Korean students particularly need to know if the problem is solved at all. In the German context, the students learn a number of different methods (without concrete application). After having studied those methods, their task is to solve a concrete problem by choosing the appropriate method and maybe modifying it (in the Korean context, modifying a taught method is unusual). If the German students' results are not appropriate, they need to know which step of their solution based on a wrong decision. Even though the German students are not fully happy with it, they are used receiving blunt feedback within a group; in such cases, Korean students use to feel very uncomfortable. A basic difference between both countries is the concept of errors. While in Germany, mistakes are understood as a chance for the individual or the collective to learn, mistakes, in the Korean context, can be understood as a personal failure. Providing feedback individually instead of giving personal feedback within group-situations would make the Korean students feel much more comfortable. The students in both contexts are of the opinion that laud is more motivating than critique. However, if appropriate, students in both contexts also want to be criticised, but more Korean students than German students understand critique as motivating: Since the Korean students want to be as perfect as possible, personally stated critique (in the upper meaning) leads to the recognition that they have to work harder to reach this aim. Just saying that something is wrong (without further explanation) is completely unwanted in both contexts. The way in which critique is expressed is very different between both contexts; the Korean students prefer constructive feedback (show, how to do it better) while the German students seem also to get along with have being pointed out what is wrong. In general, the German students are used of much more explicit communication than the Korean students. The German way to criticise could lead Korean students to feel downgraded. In the case of automatically given feedback in OERs, feedback messages, designed for German students, should be softened when being redesigned for Korean students. Something that simply is 'wrong' in the German context may be 'not completely correct' in the Korean context. Also having the chance of repeating the test and doing it better (instead on directly presenting the correct solution) in the second (or third) try could help the Korean students refreshing their motivation.

Motivation

In the context of e-learning, motivation is crucial for success. In this section we focused on two aspects, on the level of tasks and the student's reaction if a task is too difficult and the purpose/benefit for/from learning something specific. Between the investigated contexts, just two remarkable differences have been found: Korean students basically understand (the overall result is positive but the culture-indicating 60% majority has not been reached) the demand of the professor/lecturer as enough (reason for motivation) to do a task. German students expect a 'real reason' why they shall learn something. In their eyes, the simple demand of the professor is not understood as such and thus, different to the Korean participants, they gave negative answers on this question. The second remarkable difference among the answers is related to the situation of having a seemingly unsolvable task. While the Korean students say that they 'just solve the manageable tasks', the German students do not take this opportunity into consideration. The reason for this difference is unclear. In terms of OERs, again, simple learning resources and complete courses/programmes need to be distinguished. When reusing a simple resource, such as a single graphic slide, a related task can turn to be unmanageable, if the students basically do not recognise the meaning of

the graphic. When OERs are to be chosen by the educators, they need to make sure, that their students can understand the way, the information is coded; additional supervision may be needed. If learners choose specific OERs themselves in order to enrich their own learning process, it is to be expected that the problem may not occur at all, since they will not choose resources they do not understand.

Group-work related issues

In this section, the behaviour of learners in group-learning situations is discussed. We investigated typical conflict situations (as described in the literature) within and expectations on group-work scenarios but also the process of group building. In the context of adapting OERs, the results from this section have a minor relevance, because the specific conditions of group-work usually are organised by the local educators and are not part of the resource's design. When adapting a complete course or course-unit, tasks can be predefined for group-work scenarios: In such cases changes may be necessary. While in Germany, the society strongly encourages the development of individuality, in Korea a more collective spirit is present. As a consequence, the results in the Korean context often have been more explicit. While German students never would come to the idea to memorise contents in groups, this seems to be a very common situation for the Korean students. When it comes to forming a group and selecting group members, in both contexts sympathy and prior shown commitment are selection criteria. Task-related expertise seems not to be such a relevant criteria for German students. Most of the German students themselves are used to form groups, while most of the Korean students are not. However, it is unclear, how group-building processes in virtual environments are organized. As for the collaborative aspect, German students prefer doing most of the work individually and just merging each ones results in the end. Thus, a group-task should be dividable into similar sized subtasks. In contrast, the Korean students are of the opinion that a group-task is to be collectively solved. Regarding the communication styles, German students defend their own opinions much more than Korean students who understand other people's opinions as extensions of their own perspective. When it comes to evaluation, the students from both contexts prefer an individual evaluation (the Korean students even more). In terms of determining adaptation needs for OERs, if group-work is predefined in the design of a selected learning unit, educators should particularly focus on the method how groups are to be built and how the group-task is designed (to be collectively or part-wise individually solved). Adapting the locally common strategies could avoid a lot of frustration for the students. Within intercultural learning situations, where students from both contexts are asked to interact with each other, students from each context should be prepared for the contextual differences particularly regarding communication styles. A moderator could be helpful in order to intervene in cases of conflicts.

Conclusion

The uncertainty on adaptation needs, given through cultural differences between two contexts is a major obstacle for the international dissemination of OERs. Therefore, adaptability is a strong demand on OER. In order to make the context of learning better understandable and to overcome this burden, we first introduced our holistic model of the context of e-learning. Basing on the results of our empirical bi-national survey, we discussed which attitudes and expectations of learners should be taken into consideration, when determining possible adaptation needs. Concluding the findings of our bi-national survey, most found differences are less related to the contents (in the meaning of words, pictures, and other visual elements in learning materials) but much more to the social aspect of the educational design. Thus, radical changes within the resources may rarely be required. Particularly, when group-work is focused, there are some cultural aspects, which are crucial to be taken into consideration. Further on, we found differences in the understanding of and need for specific forms of feedback that should be taken into consideration when adapting OERs. Regarding the level of tasks, the reactions of students are quite different if a task is too complicated and directly affect the learning motivation. In case of the adoption of OERs, educators are strongly recommended to check if the chosen OERs are not only culturally adequate but also if the sides the students sufficient knowledge is given to understand the resources and if the culturally specific learning styles of their learners are met.

Further research particularly in terms of exploring contexts is needed so that we get a better understanding of possible levels of differences and their impact on learning scenarios. As an appropriate tool to collect such data, we have developed a standardised questionnaire. However, institutions are needed that help us translating the questionnaire and implementing it in as many contexts as possible.

We are developing a publicly available database including not only the cultural but also the other contextual aspects that we defined in our holistic context-model. As for determining possible adaptation needs for OERs, even in this early stage, this database will be a valuable information source to support achieving the competences that are needed to develop creative solutions for the adaptation process. In future, this database will not only provide the necessary data, but also tools to directly compare learning contexts and, in the meaning of a decision-support system, to determine concrete conflicting potential that leads to adaptation needs. In addition, a lot more research needs to be conducted. Neither the impact depth of the single influence-factors, nor their cross-effects yet are fully understood.

References

1. Andrade A., Caine A., Carneiro R., Conole G., Ehlers U.-D., Holmberg C., Kairamo A.-K., Koskinen T., Kretschmer T., Moe-Pryce N., Mundin P., Nozes J., Reinhardt R., Richter T., & Silva G. (2011). Beyond OER – Shifting Focus to Open Educational Practices: OPAL Report 2011. Due-Publico, Essen. Accessible under <http://nbn-resolving.de/urn/resolver.pl?urn=urn:nbn:de:hbz:464-20110208-115314-6>
2. D'Antoni S. (2008). Open Educational Resources – The Way Forward: Deliberation of an International Community of Interest. Retrieved on October 31, 2011, from <http://learn.creativecommons.org/wp-content/uploads/2008/03/oer-way-forward-final-version.pdf> [last]
3. Atkins D.E., Brown J.S., & Hammond, A.L. (2007). A review of the Open Educational resources (OER) Movement: Achievements, Challenges, and opportunities. Retrieved on November 11, from <http://www.hewlett.org/uploads/files/ReviewoftheOERMovement.pdf>
4. Conole G. (2012, forthcoming). Designing for learning in an open world. Springer, New York.
5. Easterly W. (2005). Can foreign Aid save Africa? Clemens Lecture Series Nr. 17. Retrieved on October 31, 2011, from <http://www.csbsju.edu/Documents/Clemens%20Lecture/Clemens2005.pdf>
6. Ehlers U. (2011). From Open Educational Resources to Open Educational Practices. elearningpapers, No. 23, March 2011. Retrieved on November 16, from <http://www.elearningeuropa.info/en/article/From-Open-Educational-Resources-to-Open-Educational-Practices>
7. Garland R. (1991). The Mid-Point on a Rating-Scale: Is it Desirable? Marketing Bulletin, 2/1991, pp. 66-70. Retrieved on November 16, from http://marketing-bulletin.massey.ac.nz/v2/mb_v2_n3_garland.pdf
8. Geertz C. (1987). Dichte Beschreibung. Surekamp, 3rd edition, Frankfurt am Main.
9. Handwerker W.P. (2002). The Construct Validity of Cultures: Cultural Diversity, Culture Theory, and a Method for Ethnography. American Anthropologist, New Series, 104(1), pp. 106-122.
10. Hofstede G. (1980). Culture's Consequences – International Differences in Work Related Values. Newbury Park, London.
11. Kromrey H. (2006). Empirische Sozialforschung. Modelle und Methoden der standardisierten Datenerhebung und Datenauswertung. Lucius & Lucius Verlag, Stuttgart, 11. Edition.
12. Kroeber A.L. & Kluckhohn C. (1952). Culture: A Critical Review of Concepts and Definitions. Vintage Books, New York.
13. Lenski G. & Leggett J.C. (1960). Castle, Class and Deference. American Journal of Sociology, 65, pp. 463-467.
14. Leonardi P. (2002). Cultural Variability and Web Interface Design: Communicating US Hispanic Cultural Values on the Internet. In: Sudweeks F.H. & Ess, C. (Eds.), CATaC'02 Proceedings: Cultural Attitudes towards Technology and Communication, Montréal, Australia, pp. 297-316.
15. Likert R. (1932). A Technique for the Measurement of Attitudes. Archives of Psychology, 22(140), pp. 1-55.
16. Müller H.-P., Kock Marti C., Seiler Schiedt E., & Appagaus B. (2000). Atlas vorkolonialer Gesellschaften: Kulturelles Erbe und Sozialstrukturen der Staaten Afrikas, Asiens und Melanesiens. Reimer, Berlin.
17. Olaniran B. (2007). Challenges to Implementing E-Learning in Lesser-Developed Countries. In: Edmundson A. (Ed.), Globalized E-Learning Cultural Challenges. Information Science Publishing, Idea Group Inc., London, GB, pp. 18-34.
18. Richter T. & Ehlers U. (2011). Barriers and Motivators for Using Open Educational Resources in Schools. eLearning Papers, 23/03. Retrieved on November 16, from <http://www.elearningeuropa.info/files/media/media25178.pdf>
19. Richter T. (2010). Open Educational Resources im kulturellen Kontext von e-Learning. Zeitschrift für E-Learning (ZeL), Freie elektronische Bildungsressourcen, 3/2010, pp. 30-42. Retrieved on November 16, from http://www.e-learning-zeitschrift.org/03_2010/richter.php
20. Richter T. & Adelsberger H.H. (2011). E-Learning: Education for Everyone? Special Requirements on Learners in Internet-based Learning Environments. In: Proceedings of the World Conference on Educational Multimedia, Hypermedia and Telecommunications 2011, Chesapeake, VA: AACE, pp. 1598-1604. Retrieved on November 16, from <http://www.editlib.org/p/38075>
21. Richter T. (2011). Identifying E-Learning Resources for Reuse. In: Paulsen M.F., Szücs A. (Eds.), Learning and Sustainability – The New Ecosystem of Innovation and Knowledge. Dublin – Ireland, Proceedings of the EDEN 2011 Annual Conference.
22. Schmidt A. (2005). Potentials and challenges of context awareness for learning solutions. In: Proceedings of the 13th Annual Workshop of the SIG Adaptivity and User Modeling in Interactive Systems, Saarbrücken, Germany. Retrieved on November 16, from http://www.fzi.de/images/files/pub/abis05_aschmidt.pdf
23. Wallas G. (1926). The Art of Thought. Harcourt Brace, New York.
24. Walters J.A. & Bird F. (1987). The Moral Dimension of Organizational Culture. Journal of Business Ethics, 6(1), pp. 15-22. Retrieved on November 16, from <http://www.springerlink.com/content/r162372861633j77/>
25. Weßel C. (2010). Semi-strukturierte Interviews im Software-Engineering: Indikationsstellung, Vorbereitung, Durchführung und Auswertung – Ein Fall-basiertes Tutorium. In: Fähnrich K.P. & Franczyk B. (Eds.), INFORMATIK 2010: Service Science – Neue Perspektiven für die Informatik, Band 2. 27.09. Series of the Gesellschaft für Informatik (GI). Volume P-176, Gesellschaft für Informatik, Bonn, Germany, pp. 1097-1107. Retrieved on November 16, from http://www.christa-wessel.de/files/Publikationen/wessel2010_inf10_int_paper.pdf
26. Woolman D.C. (2001). Educational reconstruction and post-colonial curriculum development: A

comparative study of four African countries. *International Education Journal*, 2(5), pp. 27-46.
Retrieved on November 16, from <http://edu-reconstruction.googlecode.com/files/African.pdf>