Exposé

Title of Ph.D. Thesis

Knowledge Transfer with e-Learning Technologies:
Initiatives from Developed to Developing Countries

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Statement of the Problem

Education is a main factor for sustainable development (Sheahan 1987; Chimombo 2005). The importance of education, especially in developing countries, is increasing because of advancing pressure to catch up with the developed world regarding, for example, global competitiveness (Hawkins 2002, 38; UNESCO). Typically, educational settings are different in developing countries than in developed countries, such as low quality of education and narrow possibilities in attending schools in rural areas because of far distances and high opportunity costs (Chimombo 2005, 131). Country-specific conditions have to be improved regarding compulsory and free education (Chimombo 2005, 130) to foster general access to education. In Article 26 of the 1948 UN universal declaration of human rights the right of compulsory and free education for everyone is already committed (UN Human Rights 1948).

A wide range of learning approaches exists already, for example, e-learning, blended learning (Maier 2007, 195-207), and distance learning which utilize information and communication technology (ICT). Using ICT can benefit, for example, students in rural areas by having them attend classes as distance learners and motivating them to learn like the “One Laptop per Child” (OLPC) initiative offers. Regarding this, the potential of e-learning seems very promising, but because of gaps between developed and developing countries knowledge transfer is not only difficult but also expensive.

Beside many definitions of the term e-learning, generally, e-learning implies the use of ICT by teachers and learners. More specifically, it can be said that e-learning consists of formal training, such as courses, ad-hoc training, selected learning objects, formalization through document collections and community formation which can be achieved via social software (Schmidt 2005, 424). The used learning objects in e-learning support with a certain learning strategy regarding the objectives (Duval and Hodgins 2003, 3) and are located in repositories.

According to case studies (see: www.uibk.ac.at/iwi/kt2dc), there are already a number of e-learning programs offered in developing countries (Kohn et al. 2008). These programs are developed by various national and international initiatives, for example, Aptech (Dhanuka et al. 2003) and World Links for Development Program (Hawkins 2002). Many of these programs are implemented through international institutions or operate cross-nationally. During the transfer of such programs country-specific differences and differences between participants, for example, learner backgrounds and language should not be ignored because these can be barriers to achieving the objectives of e-learning programs (Hodgkinson et al. 2007, 177). Therefore, only adaptation of the learning resources or general customization of the entire e-learning project should be considered. To reuse existing technologies and contents in different contexts, for example, which have been transferred from developed to developing countries at institutional level, various kinds of customizations have to
be considered (Richter and Pawlowski 2007, 4528). Specific needs of users have to be identified to supply adequate adaptation of learning resources (Brusilovski 2001, 96). Barriers, resulting of no or little customization of e-learning projects, can be of cultural character, technological character, and are due to differences in previous knowledge (Kohn et al. 2008). It has to be investigated how exactly knowledge is transferred between participants. Here, the term knowledge transfer is used as followed: knowledge transfer is part of the knowledge sharing process and requires tools for interaction, communication and networking for e-learning.

Research Questions
Why do e-learning projects tend to fail when they are transferred from developed to developing countries?

- What barriers and enablers have to be considered to avoid failure?
- How do barriers and enablers influence knowledge transfer from developed to developing countries and have to be considered in order to implement e-learning successfully?

Objectives and Methods
Descriptive objectives: based on a definition of the relevant concepts the thesis aims at filtering and describing barriers, enablers and characteristics of e-learning settings and giving an overall view where and how knowledge transfer takes place of e-learning initiatives. Showing where and how knowledge transfer takes place will help to understand where initiatives have to improve. Used methods are literature review, online research and case study analysis.

Explicative objectives: determining the success of selected e-learning initiative by accomplishing case studies. The focus is set on knowledge transfer. The cases will be investigated from the idea to the implementation phase and the consequences of e-learning projects in such e-learning settings. The case studies are designed using qualitative research methods, i.e. interviews and observation, to explore the specific cases and compare them.

Normative objectives: giving recommendation for general customization and possible adaptive solutions in designing e-learning initiatives, handling upcoming barriers based on the descriptive part and elaborating a tool to help taking relevant decisions regarding successful implementation of the initiative. By implementing e-learning programs from developed to developing countries a variety of problems can emerge as barriers within these e-learning environments. The tool will push awareness that international initiatives can make a difference regarding sustainable development if they implicate the different setting in which stakeholders act, such as the initiative itself, policy makers, teachers and learners. Therefore, enablers and benefits will be integrated in the tool as well.
**Thesis Structure and Definition of Work Packages**

The research design covers a literature review, an extensive analysis of case studies, an empirical study which includes empirical data collection in initiatives and the design of a tool as described before. The research strategy follows a model (see figure 1) involving ICT used in e-learning initiatives, educational institutions that offer e-learning programs and participants in e-learning initiatives. The success, if initial goals are achieved, will be elaborated in respect to influencing enablers and barriers of such initiatives. If necessary, adaptations of the e-learning program and e-learning resources have to be sophisticated.

![Research Model](image)

*Figure 1: Research Model*

The thesis is structured into seven work packages which will be defined below.

**WP 1: E-learning as a potential for development**

Firstly, the used terms will be outlined through concrete definitions. Secondly, a state of the art about theories, concepts and models, such as e-learning models and possible knowledge management models for e-learning in education, and knowledge transfer with learning resources in education, specifically in/for developing countries, will be given through a literature review. Additionally, initiatives that act in this area will be investigated.

**WP 2: Knowledge transfer with e-learning initiatives**

The investigated e-learning initiatives will be analyzed and accomplished case studies examined (1) to underline the importance of such initiatives in developing countries, (2) to identify barriers, enablers and characteristics of settings and (3) to classify them regarding knowledge transfer of e-learning in developing countries.
WP 3: Analysis of e-learning settings – enablers and barriers
Different learning settings will be analyzed regarding knowledge transfer. This will be at institutional level as well as the learning environment itself. The specific characteristics of learning settings and requirements in developing countries will be elaborated. Afterwards, possible solutions to limit or even overcome identified barriers will be presented. Enablers and lessons learnt from other initiatives can be considered as reducing failures.

WP 4: Empirical Study: knowledge transfer in e-learning initiatives
As there is still a limited number of scientific case studies regarding the use of e-learning in developing countries, an empirical study will be designed to examine possible solutions for the list of identified barriers using among others identified enablers. A list of recommendations for designing initiatives will be developed.

WP 5: Success of e-learning initiatives
Through literature review and data analysis of the accomplished case studies success of such initiatives will be deduced: success means here that objectives and outcomes match. If objectives and outcomes differ, the initiative is not completely successful regarding the initial purpose. A success criteria catalogue will be set up.

WP 6: Designing a tool of the specific use of ICT for knowledge transfer
A tool will be designed for the use of ICT supporting knowledge transfer regarding the different levels of interaction and the different influences, i.e. enablers and barriers, in e-learning initiatives in developing countries.

WP 7: Finalizing
The thesis will be finalized.

Timeline

<table>
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<tr>
<th>Work Package</th>
<th>Status</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
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<tr>
<td>WP 1 E-learning as potential for development</td>
<td>ongoing</td>
<td>01.07.2007</td>
<td>01.11.2008</td>
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<td>WP 2 Knowledge transfer with e-learning initiatives</td>
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<td>WP 7 Finalizing</td>
<td>not started</td>
<td>1.11.2009</td>
<td>31.12.2009</td>
</tr>
</tbody>
</table>

Table 1: Timeline and status of work packages
Literature


