Cases on Technology Enhanced Learning through Collaborative Opportunities

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This case illustrates the production and use of DVD-production "Looking for Charisma" in the area of business administration and management training with an emphasis on how real business applications are related to the theoretical knowledge background concepts gained from textbooks.

Karen Kaun of Knowledge iTrust (KIT) and Payal Arora discuss *Peace Diaries*, a forum where educators, students and their families of diverse cultural backgrounds and discourse groups could gather and submit multi-modal literary works addressing issues of personal, local and global significance. They attempt to explore its enormous potential towards a Global Education Greenhouse, a corporation in formation, which will create a new class of products and services for students in primary and secondary schools/ grades K-12 addressing a void in the current educational system.

Hamed Fazollahtabar opines that the e-learners are working in isolation with limited or sometimes non-existent human support and thus first impact of any failure in the providers' quality assessment falls on the e-learner. In his case of Fuzzy Logic for Real-time Comprehensive Quality Assessment Model, he discusses that the e-learning development being a team-based activity, the effectiveness or quality of an e-learning program depends on the weakest link in the production chain and e-learning exists at a point of convergence between technology based disciplines and human-centered disciplines.

Elena Verezub in this case illustrates about a project which aims at designing an e-learning program for students studying within the Department of Horticulture and Environmental Science of an Australian University, with an additional focus on improving students' reading comprehension of hypertexts in the subject-specific context. The case study also discusses STEEP issues concerned with the project.

In this case, Victor C Wang focuses on technology enhanced learning in China in the light of technology enhanced learning in the USA. He discusses the challenges in the Chinese educational settings due to its dependence upon radio and TV. He further opines that analysis in this case can be considered as a generic one as the issues and challenges are similar to the universities across China's educational settings.

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The authors of this case indicate that the many rural schools in the United States have turned to distance education while facing with problems of providing a comprehensive curriculum and qualified teachers. This case examines the use of distance education in the United States through a national survey pertaining to the use of distance education, analysis of barriers to distance education and an experimental study of enhancing distance education by more appropriate training of local facilitators to support students in rural schools.

Getnet Bitew in this case discusses live "plasma" TV as an instructional delivery tool in government secondary schools of Ethiopia and focuses on the problems encountered when the students are not active in the learning process while using this mode. He rationalizes the use of "plasma" TV lessons to be distributed on CDs and its use as a supplementary instructional aid to help the students in developing their creativity, problem solving and critical skills.

This case highlights the transition of an existing distance education program into an interactive fully-online undergraduate degree program of Saint Mary-of-the-Woods College (SMWC). It discusses the rationale behind the design of the program to suit an online community of learners with a format and focus that appeals to net generation (millennial), neo-millennial, and computer savvy non-traditional students, including military personnel.

In this case, the authors outline the challenges of program development, delivering effective course content, using appropriate learning strategies, operating in a cross-cultural context, and working in an organization with limited technological capacities while establishing a joint international masters' program

in Instructional Technology in a Central American country. It further discusses the possible opportunities for establishing strong, mutually beneficial relationships with the Central American country, the Central American University (CAU), and the students.

This case study by Peter Haber, Erich Herber and Manfred Mayr discusses the adaptation and extension of ADDIE Model by Pool2Business (P2B) Consortium to establish a modular online course which addresses on one hand certain specific requirements and qualifications of a company, language and culture specific differences between participants and on the other hand, ensures provision of Project Integrated Training in which the learning outcomes can be immediately used in practical application and thus developing highly qualified project-managers for virtual collaboration.

Foreword

I am very pleased to be able to contribute a Foreword to this important collection of case studies of the changes that the adoption of technology enhanced learning demands of institutions, teachers and researchers, and learners. The volume of essays is important in a number of ways. Firstly, the collection is truly international, and offers case studies from many parts of the world. The substantial international experience of the Editors has brought together a collection that is compelling in its breadth of reference. This is of great value, as the professional understandings of educators must now be international, to reflect the globalising world that they and their students live and work in. It is also the case that for this subject matter in particular- the adoption of new technologies for learning and teaching – the very technologies themselves make international experience both available to us all, and also create an imperative for educational institutions to work more and more across national boundaries.

Two key dimensions of this new age have to be assessed and deployed for the purposes of supporting technology-enhanced learning. These are:

- connectedness
- information and resources

The key to the changes that have been bewildering over the last decade has in fact been the inter-relationship of the two. Most learners now have access to huge resources that have hitherto been locked behind the entrance desks of university libraries in addition to the extraordinary amount of sources and archives that have elsewhere been similarly opened up. This is combined with our ability to discuss these, and provide our own accounts of them, through the development of Web 2.0 tools – blogs, wikis, forums and beyond - which has meant the growth of so much learner-generated information and commentary, of all qualities, on the web. Thus we see communities grow up which are fluid, accepting new members every day at the same time as others leave. This follows directly in some aspects the traditions of distance education which have freed up the learner from the constraints of time and space and accelerated the shift from didactive to facilitative modes of teaching and learning within a constructivist framework.

As a result of this, enquiry and scholarship have become core activities in almost all fields. The new technologies have played an extraordinary part in liberating knowledge from the locally produced and managed to the universally available with contributions from around the world. Enquiry, supported by scholarship in the broader sense, thus stands at the heart of human activity. It is now a form of activity in all its variety of far wider interest than just the world of the University. It has over the last 30 years spread down through the age groups and across organizational types. While 30 years ago enquiry in the sense of independent, even if supported, research was primarily restricted to postgraduate work

in universities, it has now spread into baccalaureate or undergraduate degrees, and even into schools, as important practice that learners need to master. It is also at the core of organizational and business practice across all sectors.

The case studies in this volume bring these points out across a range of fields of activity. Finally it is worth saying that the case study approach has its particular merits in this field. It allows learning to be created inductively, from the particular to the more thematic and conceptual concerns to which it may give rise. In this way the Editors have provided space for readers to create their own learning as they reflect on the issues of educational need, pedagogy, policy, and management, all of which are challenged by the continuing fast development of technology-enhanced approaches to learning.

I commend this volume to its readers, and am grateful to the Editors for the contribution it makes to our field of work.

Alan Tait
Pro-Vice-Chancellor, and Professor of Distance Education and Development
The Open University, UK

Alan Tait is Pro-Vice Chancellor for Curriculum and Awards at the Open University UK and was formerly Dean of the Faculty of Education and Language Studies. He is Professor of Distance Education and Development and has a long record of professional practice, publication and the support of professional development in distance and e-learning. He is Editor in Chief of the European Journal of Distance and E Learning (EURODL), and Co-Director of the Cambridge International Conference on Open and Distance Learning. Prof. Tait has worked widely in developing countries for international organisations such as UNESCO, the European Commission and the Commonwealth of Learning and is currently President of the European Distance and E-Learning Network (EDEN).

Preface

This book is, in principal, for an audience of policy makers, planners, distance educators, trainers, teachers and researchers in education, learning and development. With an aim of being developed as a resource book for researchers in ODL, higher education and management and development of education, this book is intended to benefit Educational Technologists and Social Science researchers besides being relevant to social workers also, who will find this volume pertinent due to its analysis and evaluation of educational and technological development environments in respective countries.

The collection of cases in the book analyzes and evaluates how organizations and institutions of learning in the developing and developed world are adapting to technology enhanced learning environments and exploring transnational collaborative opportunities, thus providing prospects for learning, growth and development through a blend of traditional and technological methods. The reader will get a composite and comprehensive perspective of how technologically enhanced learning environments have affected the educational institutions in different countries and vice-versa. An effort has been undertaken to shape this book to provide an international platform to policy makers, educators and trainers, educational administrators and researchers through which they can contribute and share their experiences, ideas, attitudes and perspectives on how institutions in their respective countries are adopting technology and collaborating with partner institutions for addressing the socio-economic issues towards providing education and development opportunities.

A varied array of cases on technology enhanced learning and collaborative opportunities from countries like Australia, Austria, Canada, China, Ethiopia, Germany, Greece, Iran, Lesotho, South Africa, UK and USA is presented in the book. The readers will find illustrative cases of CAMEL (Collaborative Approaches to the Management of e-Learning) metaphorical model, inclusive learning, desktop virtual reality for road safety, person-centered learning, quality assessment model in e-learning, distance education in rural schools, project integrated online learning as well as cases on technology for teacher training and development such as blogging for effective teacher education, blended teacher education program, and professional development through technology enhanced courses. The book also gives opportunity to readers to get acquainted to cases on technology assisted learning in Lesotho, Ethiopia and China. This collection also showcases researches on Global Education Greenhouse, collaborative relationship for blended learning program, innovative online learning, E-learning in Horticulture and Environmental science and comparative tale of universities in using audio-graphic web conferencing.

The first chapter of the book, "An e-Learning Metaphor: The CAMEL Nomadic Community of Practice," is a case study by Jill Jameson, wherein she discusses collaborative e-learning, wherein technological and human adaptability is fostered in a community of practice (CoP). It highlights the CAMEL (Collaborative Approaches to the Management of e-Learning) metaphorical model in a designed community of practice in the light of social and technological issues. The author opines that the camel

metaphor was formative in stimulating understanding about building communal solutions to sustainability, low-cost innovative engagement and improved cooperation with others and suggests that this model can provide transnational insights for e-learning development.

In the second chapter "Interaction Design for Inclusive Learning," Deryn Graham, Ian Benest and Peter Nicholl discuss the findings in a case study on improving interaction design for teaching visually impaired students, in an inclusive learning environment with due emphasis on ability to draw and understand diagrams. The findings of the case have led to design criteria and to an application for a large scale project, to produce generic tools and to enable "multi-modal" teaching and learning, with connotations for the support of people with cognitive as well as physical impairments.

This chapter is based on the use of blogs for making teacher education effective in English as a Second Language (ESL) teaching. The authors Francis Bangou and Douglas Fleming in their research conducted semi-structured interviews of teacher candidates in order to explore the ways in which these teacher learners use and perceive blogs within a course directed towards ESL teaching methods, thus, highlighting the issues related to technological integration in teaching and learning and formulating important recommendations for guiding the teacher educators who are working in similar contexts.

The fourth chapter provides a valuable insight into a comparative study of two Australian regional universities towards the effective use of synchronous audiographic web conferencing as learning and teaching tool. The authors Birgit Loch, Shirley Reushle, Stephen Rowe and Nicola Jayne discuss the trials of the web conferencing tool, Elluminate *Live!* (Elluminate) at the two universities and highlight issues and challenges relating to software trials in educational environments. The case suggests recommendations which can be beneficial for those institutions who may be considering the adoption of similar technologies for enhanced access to learning and development.

In the following chapter, Kathryn Ley and Ruth Gannon Cook are concerned about the application of Action Research for Marketing a Blended University Program. The authors describe a successful marketing effort for a blended learning program, which is aimed to be delivered to a culturally diverse urban and suburban adult non-traditional population. The case discusses the core issue of successful marketing process in two phases i.e. renewed effort and measurable success. It also illustrates the marketing of university programs in the light of relationship marketing and how university recruiting becomes marketing. The outcome of the case suggests, the hybrid courses can allay learner fears associated with online courses and can offer more time and place convenience than the traditional courses besides facilitating learners' transition to online courses.

Sibongile Simelane in the chapter "Professional Development Programme in the Use of Educational Technology to Implement Technology-enhanced Courses Successfully," points towards the global realization for the need to provide professional development programmes (PDP) meant to help teachers gain competency in ways of integrating technology into education. The case study highlights the important characteristics of such a PDP, the e-TUTO programme of Tshwane University of Technology in South Africa while exploring the experiences of the participants of this programme and looking at the emerging issues and challenges involved.

The seventh chapter of the book explores the possibility of application of technology for teaching children about road safety using Desktop Virtual Reality. The authors of the case, Emmanuel Fokides & Costas Tsolakidis, believe Virtual Reality can be used for this purpose with effective results. The case elucidates 3D video game based application for simulating the environment of a town with traffic and special conditions such as night and rain and also simulates the walk of a pedestrian while accommodating many users simultaneously.

Thie chapter "Blending Traditional and Technological Factors in Teacher Education in Jamaica," by Aleric Josephs highlights the challenges and opportunities in blending traditional and technological factors in teacher education. While presenting a discussion on how a Bachelor of Education program articulates distance learning and face-to-face modalities and examines the skills needed and the challenges involved in developing a curriculum for teaching History through a blended approach, she suggests readiness of faculty and learner to adopt technology as well as careful consideration of the use of technology is crucial for the success of blended learning in traditional teaching environment.

Christopher Thomas Miller is of the belief that it becomes necessary to explore new ways of addressing the instruction that goes into distance education when the distance grows between the instructor and student within education. The author in this chapter describes a distance-based instructional model, the person-centred model of instruction, as well as a case study implementation of the person-centred model of instruction in a web-based course by focusing on a research to determine whether there are differences in significant learning between a group that used the person-centred model of instruction and a group participating in a constructivist learning experience.

Angelina Khoro, the author of "Distance Education and ICT-Supported Learning in Lesotho: Issues and Evidence" regards Information and Communication Technologies (ICT) as a major contributor to the transforming of distance learning and feels that education practitioners in developing countries like Lesotho, have limited, or no access at all to ICT for supporting instruction, since they still rely heavily on print and tutor/learner meetings as their distance mode of course delivery. This paper is a feasibility study on possibilities of introducing ICT-mediated education for tutors and learners on a Distance Education Programme in Lesotho. The paper specifically focuses on issues, policy initiatives and challenges involved in introducing computer-mediated learning in distance education programmes.

In the eleventh chapter of the book, Wolfram Laaser discusses the effectiveness of DVD technology for management training in higher education. The author illustrates the various issues and concerns on the production and use of DVD-technology for developing training and development sessions for management program through distance education. The case also looks into issues of producing bilingual versions (German/English).

The authors of twelfth chapter, Karen Kaun and Payal Arora, provide a discussion about Global Education Greenhouse towards constructing and organizing online global knowledge. The case covers aspects of the initiative of the *Peace Diaries* project to establish a forum for multi-modal literary works concerning issues of personal, local and global significance and its extension of this initiative into a more synthesized and sustainable online global education portal.

Hamed Fazollahtabar considers assessing quality an obviously key concern for learning, education and training so he questions "why should it be especially crucial in relation to e-learning?" He argues that the e-learners, as with other distance learners, are working in isolation with limited or sometimes non-existent human support which implies that the first impact of any failure in the providers' quality assessment regime falls directly on the e-learner. In this case study, an analysis of different aspects of quality in e-learning is done and then using fuzzy logic approach, a comprehensive assessment model is proposed.

Elena Verezub in the fourteenth chapter of the book is discussing a research project with the aim to design an e-learning program for students studying within the department of horticulture and environmental Science, with an additional focus on improving students' reading comprehension of hypertexts in the subject-specific context. The case also examines the STEEP dimensions associated with the project.

The case "Technology Enhanced Learning in China," by Victor Chunxue Wang brings to the fore various issues and challenges related to implementing technology enhanced learning methods in China based on his study of a typical university of foreign languages in northern China while presenting a comparative analysis with that in the United States of America.

Hannum Wallace, Matthew Irvin and Claire de la Varre in this chapter of the book explicate the application of distance education for extending the educational opportunities in the rural areas. The authors opine that rural schools in many countries face problems in providing educational opportunities to children and youth for a variety of reasons while facing particular difficulties in attracting and retaining qualified teachers. Many rural schools in the United States have opted for distance education due to the problems of providing a comprehensive curriculum and lack of qualified teachers. This case explores the use of distance education in the United States through a national survey of distance education use, analysis of barriers to distance education and an experimental study of enhancing distance education through more appropriate training of local facilitators to support students.

Getnet Bitew explores the case of technological adaptability in the education system of Ethiopia specifically on using live "plasma" TV as a principal mode for instructional delivery in the government secondary schools. In this study, he is of the view that current "plasma" mode of instruction cannot continue in the way it is if it is genuinely intended to help the students develop their creativity, problem solving and critical skills and teachers and students should get enough instructional time in the class-rooms for discussion.

The next case study "Building An Interactive Fully-Online Degree Program" by Jennie Mitchell and Daesang Kim focuses transition of an existing distance education program into an interactive fully-online undergraduate degree program at Saint Mary-of-the-Woods College (SMWC) to be launched in 2010. It renders an overview of the program, the process of its development, and technological and organizational concerns related to the design and delivery of this program, and provides a discussion on the Web 2.0 technologies used during the development of this program, meant for net generation (millennial), neo millennial, and computer savvy non-traditional students including military personnel.

In the nineteenth chapter, Ravisha Mathur and Lisa Oliver discuss the challenges of program development, effective course content delivery, using appropriate learning strategies, operating in a cross-cultural context, and working in an organization with limited technological capacities while establishing a joint international Masters' program in Instructional Technology in a Central American country. The case highlights overriding theme of capacity-building in developing this blended learning program so that Central American University is able to take over and manage the program on its own.

The authors Peter Haber, Erich Herber and Manfred Mayr are of the view that new project management skills and processes are prerequisites to meet the challenges of the globalization, and transnational and distributed ICT projects need highly qualified project-managers for virtual collaboration. The case in the final chapter of the book discusses Pool2Business (P2B) project with an objective of establishing a modular online course to address certain specific requirements and qualifications of a company, language and culture specific differences and to ensure that the learning outcomes can be immediately used in practical application. It illustrates that based on extended ADDIE Model, the P2B-Consortium is able to establish the whole curriculum more effectively by having the same strategies, following the same procedures and knowing the next steps to fulfill the target of P2B.

Evidently, more and more institutions across the globe are turning to advancements in technology for enhancing access to learning and development and in doing so, are looking for collaborative opportunities in order to maximize the benefits of technology mix for education. These initiatives are being

undertaken not only within the confines of the institutions in developed nations but also in developing countries where there is greater realization and enhanced awareness for exploring the prospects of using ICT for education and overall development.

Here, we as editors of this collection of cases on technology enhanced learning and collaborative opportunities extend our sincere acknowledgement and gratitude to the authors of the case studies who have contributed papers on varied research studies and experiences making this an interesting forum for presenting international perspectives on technology assisted learning, education and development. We hope that this compilation of cases will prove to be an interesting reading for the audience and it will encourage further discussion and deliberation on this important subject area. Finally, we are grateful to the IGI-Global team who have been extremely forthcoming from the very inception of this project and we are thankful for their help, support and cooperation during the development and publication of this book.

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Editors