OPTIMIZING GLOBAL DISTANCE LEARNING SYSTEMS: THE ETK MODEL

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ABSTRACT

This paper presents some of the realities and trends of new generation distance learning systems and organizations resulting from globalization, and the challenges faced by educators and trainers in serving global communities with cost-effective designs. It introduces the ETK model as a useful conceptual tool to optimize the planning, development and implementation of global distance learning. The authors review their practical experience spanning two decades in the creation and management of the unique global collaboration network ITC-GNET (www.itc-group.org), a multi-modal, multi-technology and multi-media distance learning system serving over 100 **o**rganizations in 13 countries, supported by its academic entity San Diego Global University (www.sdgu.org).

INTRODUCTION

Globalization is impacting our communities at all levels, in education, business, government and civil society. Human, technological and knowledge dynamics have accelerated in the last thirty like never before in the history of mankind. Ample literature exists on this subject [1]. Various authors have described the development of new global dynamics concepts such as a "global mindset", global competencies [7] and globally-oriented management strategies such as "organizational synchronization"[6]. Telecommunications have had a major role to play. Particularly in education, distance learning systems have emerged as "virtual classrooms" and "E" infrastructure has emerged and exploded globally [3]. Investment, technological, managerial, instructional and logistic decisions related to these systems have become major challenges for universities, school systems, corporations and governments, particularly now that life-long learning beyond the traditional classroom is becoming an increasingly accepted concept. Standards for the design, development, operation, coordination and management of these distance learning systems have been slow in emerging. [2] published the first professional standards of "distance activity" for coordinators of distance and networked education only four years ago. These global standards are slowly being adopted around the world today.

GLOBAL DISTANCE LEARNING SYSTEMS DESIGN AND PRACTICE

Practitioners are struggling with guidelines for the design and selection of modalities (synchronous or asynchronous, point/multi-point, etc.), technologies (satellite, digital telephony, Internet), and media (video, audio, text) in distance learning systems. In fact, these concepts of system design are often confused in the theory and practice of distance education and training. Educational technologists often emphasize instructional design and "transactional distance" concepts over the overall global system considerations. There are many challenges and problems with current distance learning systems around the world. Many of them lack synchronous communication capabilities. This is a major inefficiency, particularly for globally-oriented systems. Asynchronous media such as Internet forums and messaging

are useful but not sufficiently effective in environments with decentralized communities of learners. Although taking advantage of complementarities among different delivery technologies is a key element to optimizing distance learning design, most system designs today are uni-modal and uni-technology (mostly Internet-based). Online multimedia is considered by many educators and trainers as a preferred delivery protocol. New generation Web-based media and content management systems or portals are now being created to convert these IT-based platforms into less expensive and more user friendly Web-based systems. Browser-based portals will gradually become the new standard for desktop and portable computing, as they are device and platform independent. Yet, the strength of the Internet is as a multi-point/multi-point delivery technology. It is much more costly when used for live or synchronous point/multi-point collaboration. As knowledge becomes more global, distance learning will become the main vehicle for its distribution and dissemination. New global knowledge is competency-oriented. The explosion of knowledge of the last thirty years has created new competencies that everyone needs to become more competitive. An example is San Diego Global University (www.sdgu.org), an online institution offering programs designed to develop professionals with "global competencies". This is the new orientation of distance learning content, emphasizing skills and competencies useful horizontally and vertically in any type of organization, anywhere in the world.

THE ETK MODEL

The ETK concept and model was first proposed by Cardenas [5] as a key tool for managing in the New Economy. It emphasizes the importance of human/emotional (E), technological (T) and knowledge (K) variables, and their interaction, in our new globalized realities. The ETK model has been studied as an applied model in several contexts including those of designing and assessing organizational performance, acquiring technology and negotiation for technology acquisitions [8]. We propose that the context of education, and specifically global distance learning, is very much suitable for the application of the ETK model. It is a useful conceptual tool to optimize the planning, development and implementation of global distance learning systems. First, this model offers a key practical framework to incorporate cultural and language components quite often missing in distance learning systems today. Although English language proficiency should be considered as an increasingly important work-skill globally, most populations in developing countries do not have the appropriate competency levels to take advantage of English-language contents and programs. Furthermore, cultural and religious traditions and styles should be respected in the protocols and scheduling of distance learning tasks and collaboration. Combining distance and face-to-face learning activities (multimodal) facilitates the incorporation of these E variables in global distance learning systems .Second, the ETK model also provides guidelines for the sequential application of telecommunications technologies (satellite, digital telephony, Internet) by stressing their complementarities for optimal design. Satellite is ideal for synchronous point/multi-point delivery and group learning; digital telephony and ISDN lines excel in point to point interactive communication and group learning; while the Internet strength is in multi-point/multi-point individualized learning. An optimal distance learning system should use these three technologies sequentially [4].Third, an ETK framework motivates the urgent need and opportunity to develop competency with global knowledge ("global competencies") around the world through new generation distance learning and human collaboration systems approaches. For many years academic and competency-oriented curricula were considered competing approaches. The intense competition brought about by globalization today mandates that academic and professional degrees and curricula must now be more skill oriented, while skill development and training programs must now have a broader knowledge component [7]. New generation Web-based portals will support the creation of global knowledge directories and "learning zones". These knowledge resources will be multi-lingual,

and will allow educators and trainers to directly build and create their courses and curricula without any IT specialists.

THE ITC-GNET NETWORK: LESSONS AND RESULTS

ITC-GNET is a multi-modal, multi-technology and multi-media distance education and training network. Live satellite video-seminars transmitted in English and Spanish from the central node or hub in San Diego to over 1,000 receive sites are followed by point-to-point interactive roomvideoconferencing dialogues among these sites. The satellite-delivered video-seminar is packaged and encoded for the Internet in English and Spanish, and a third phase of distance learning follows by individual users from member organizations accessing the corresponding online video-course on the ITC website. ITC-GNET site coordinators implement follow-up learning and instructional programs with local content experts and consultants at each of the three phases of distance learning described above. Presenters of the original satellite video-seminars are often invited to visit network sites to participate in face-to-face instructional activities and programs. An Internet-based ITC IPhone provides global communication capabilities between sites without time-based costs, making multilingual collaboration a reality. ITC-GNET is a unique multi-national example of the concept of student-centered learning in distance education.

CONCLUSIONS

The ETK conceptual framework and model can be an effective resource that can be used for optimal decision-making by educators and trainers involved in globally-oriented distance learning and collaboration systems. Practical experience spanning two decades by the authors indicate that multi-modal, multi-technology and multi-media educational systems will be the norm, rather than the exception, in the years to come despite the popularity and pervasiveness of the Internet and the marketing success of IT-based online learning management platforms up to now.

BIBLIOGRAPHY

[1] Cardenas, M.A. et al The MAC Effect**,** ICG Publishers, Chula Vista, CA, 1999.

[2] Cardenas, M.A.Competency-Based Performance in Distance Programmes with a Global Focus, *Staff and Educational Development International (SEDI)*, 4 (2), 2000.

[3] Cardenas, M.A., Education and Training through Telecommunications: The Role of Universities and the Benefits to our Globalized Society, *SEDI*, 5 (1), 2001.

[4] Cardenas, M.A. A Sequential Systems Strategy to Optimize the Productive Use of Telecommunications Technologies for Education, Business and Government, *XV Conference o*f *AAOU***,** IGNOU, Delhi, 2002.

[5] Cardenas, M.A. and Finnigan, J., ETK Excellence: Key Competencies for Managing in the New Economy, On-line video-course www.itc-group.org, San Diego, CA, 2002.

[6] Cardenas, M.A. and Goldstein, S. Maximizing Value through a Synchronized Organization: Optimal Resource Management, Online video-course, www.itc-group.org, San Diego, CA, 2003.

[7] Cardenas, M.A."International Managerial Leadership as a Global Competency" *SEDI*, 7(3), 2003.

[8] Kumar, R., Krishnamoorthy, M., and Cardenas, M. Technology Acquisition and Innovation: An Integrative Approach to Organizational Performance, 15th POMS Conference, Cancun, 2004.