The Building of Knowledge Networks with Interactive Radio Programs in Distance Education Systems

Gülsün Kurubacak, Ed.D.
Distance Education Department, College of Open Education
Eskisehir Anadolu University
TURKEY
gkurubac@anadolu.edu.tr

T. Volkan Yüzer, Ph.D
Distance Education Department, College of Open Education
Eskisehir Anadolu University
TURKEY
vyuzer@anadolu.edu.tr

Abstract: In the 21st century, there is new paradigms shift from traditional distance education approaches to network-based elearning understandings. In considering how best to optimize distance education systems, economy (cost effectiveness and efficiency), technology (communication technologies) and equity (gender, accessibility, minority, language, religion etc.) are vital issues in any distance education systems. Moreover, how end-users, distance learners, can equally share and exchange knowledge and resources for educational purposes, how they can promote their higher-order thinking skills as well as how they can cope with the limitations they have (such as time, age, gender, language etc.) are main concernsThese are major concerns in distance education milieus. Kurubacak and Yuzer strongly emphasize that interactive radio programs, forgotten educational medium, with a little cost can effectively integrate in any distance education systems. Therefore, the main purpose of this paper is to focus on interactive radio programs to build critical and creative knowledge networks among diverse learners in distance education systems.

Introduction

To reach several people in a short time, the first radio programs were broadcasted in the first quarter of the 20th in the USA. (Crisell, 1994) In the beginning of the 21st century, there is no patch of land, no piece of ocean surface untouched by electromagnetic signals beamed from the more than 35000 radio stations worldwide. (Keith, 2000) Now, depend on their policies and politics, radio channels are delivering commercially one or more programs in music, interviews, news, sporting events etc. during their daily broadcasting periods. Besides, radio, as a delivery system throughout the world, has been used very successfully in education systems for many years.

The integration of educational radio programs was growing significantly in all levels of education and training, especially in distance education systems in early 1960's. The major characteristic of educational radio, however, was that either a one-way interaction or no interaction was provided in class-based works for individual learning. Like McLuhan (1964) said, however, educational radio programs supported to create new learning environments without walls. Not only have improved radio programs, but also other enhanced communication technologies, such as TV, computers, the Internet, the Web etc. got more people day after day at the last three decades of the 20th century. Moreover, technology-based learning in this information age started to change the way people design distance education systems with interactivity. No idea characterizes distance education systems in the 1990's, as does interactivity, which has three key etiquettes (Abbey, 200): 1) providing quality, 2) clearly defining purpose and 3) supporting communication among designers, learners and resources. To create multi-way interactivity in distance education systems, the impact of cutting-edge technologies such as the Internet, the Web etc. on distance education has becoming much noticeable for the last two decades. On the other hand, distance education and communication designers did not pay enough attention to utilize radio, as a low-tech educational tool, itself and/or with high-tech to create open and flexible learning settings. It is forgotten that each communicational medium in distance education has its pros and cons, and none has better quality to all others in any learning purposes. (Rowntree, 1994)

Today, many schools, colleges, universities and organizations prefer to use high-tech in their distance education systems, and have yet to completely adjust the remarkable potentials of these new communication technologies; because of obstacles to novelty itself. However, there is a new paradigms shift from traditional distance education approaches to network-based elearning understandings. (Bonk & King, 1998; McLeish, 1999) In considering how best to optimize distance education systems, economy (cost effectiveness and efficiency), technology (communication technologies) and equity (gender, accessibility, minority, language, religion etc.) are becoming vital issues in distance education. Moreover, there are three major concerns in today's distance education milieus: 1) how end-users, distance learners, can equally share and exchange knowledge and resources for educational purposes, 2) how they can promote their higher-order thinking skills, and 3) how they can cope with the limitations they have (such as time, age, gender, language etc.). Radio in distance education systems can provide useful answers with diverse learners to solve easily all these arguments discussed above. Moreover, spending less money, radio can be used in distance education, except for printed materials relatively. (Rowntree, 1994; McLeish, 1999) On the contrary, one of the fastest-growing events in distance education systems is the use of cutting-edge technologies that have difficulties in inadequate-trained personal and faculty career, restrictions in institutional funds, and obstacles in necessary equipment.

Radio can be valuable in distance learning milieus ranging from schools, colleges and universities, from commerce and industry to public sector organizations. (Mason, 1994) Moreover, distance radio programs can provide more flexibility and openness, and easier accessibility to knowledge as well as better higher-order thinking skill improvements with high-tech learning environments. Kurubacak and Yuzer strongly emphasize that interactive radio, as a forgotten educational media, with a little cost can effectively integrate and use in any distance education systems. Therefore, the main purpose of this paper is to focus on interactive radio programs to build critical and creative knowledge networks among diverse learners in distance education systems. Besides, the requirements and interactivity methods of interactive distance radio programs will be discussed and analyzed in this study.

Background of the Study

Diverging the rhythm of life and the sources of poverty in the 21st century, distance learners around the world are under growing pressure to gain the knowledge and skills they need. As is the case for distance education systems in this century, not only can radio provide extremely remarkable improvements, but also it can support learners with skills and knowledge in active, knowledge-rich and continuously changing learning settings. Therefore, it is extremely crucial that understandings of how radio can create new distance milieus in which learners are able to take greater responsibility for their own learning and constructing their own knowledge. (Resta, 2002) For that reason, Kurubacak and Yuzer, discuss *the rhythm of life in today* and *the sources of poverty in today's society* as the foundations of distance education systems in the 21st century.

The Rhythm of Life in the 21st Century

Daily life in the 21st centuries has a very high rhythm, especially in cosmopolitan metropolises. The first important feature of these metropolitan areas in this century is extremely crowded with multi-cultural and diverse people. Especially, after the industrial revolution in the world, individuals find jobs in factories and institutions established in the cities or they found their own jobs near the cities that the rapidly growing population force city borders enlarge. Now, people in cities, however, have to spend much more time to reach their jobs or another target places, such as movie theaters, shopping centers in time. Besides, it is becoming impossible for individuals to travel between small villages and cities in the developed or developing countries in the years of 2000's, because of the rash traffics on the limited roads with large number of people. The second necessities of living in the information age are to encourage people to have much more specialties and needs. Learning more about everything and using knowledge in the right way starts to provide better lifestyles for people living in metropolises and rural communities. However, acquiring better life styles in the 21st century depends on how fast people access regularly to rapidly changing and increasing knowledge.

Thirdly, to produce rapid changes in the society of the 21st century, high-tech communication technologies have essential role to alter the way people collaborate and do business. The problem is that high-tech based life styles can offer limited flexibility and openness for learning in rapid technological change. Moreover, there are major difficulties for many people to interact with these new technologies: 1) need proper, wide-ranging and high-cost equipment, 2) have the special skills and knowledge to use them effectively.

Finally, the power to access knowledge carries augmented responsibilities to everyone in nowadays-high tempo societies, which need to redefine the legal and moral codes of the intellectual property of freely accessible knowledge. The challenges faced by the 21st societies, locally and globally by adoption of technology must become part of the high tempo in today's life that helps people to develop an effective voice in gaining necessary knowledge. (Resta, 2002) In summary, there is no end for learning to catch better life styles in the 21st century, but the high rhythm of today's life not only becomes a daily routine for individual, but also requires using time efficiently to obtain necessary knowledge in a short time.

The people living in this century are surrounded by dramatically changed technologies and immerse amount of knowledge. Therefore, learning is becoming a life long process and the most essential part of jobs. Distance education can be an answer about obtaining new knowledge in this high-rhythm society, and also serve interactive methods with using different communication technologies. Today, to design and implement successful programs with cutting-edge communication technologies, distance education systems generally offer people having huge amount of knowledge whenever and wherever they want. Besides, because of having leadership roles in the transformation of knowledge, distance education systems provide the new pedagogies and models for learning, and fundamental educational reforms with the rapid technological changes of the 21st century. (Wiburg, 2001; Bonk & King, 1998; Resta, 2002) Emerging technologies, however, cannot always provide people flexible time to access indispensable knowledge due to the very high tempo of the life styles of this era. In addition, reaping promptly changing huge amount of knowledge with new communication technologies requires unquestionably more time, new skills and powerful financial plans. Therefore, unlike Marquardt and Kearsley (1999) emphasize, the cutting-edge technologies have not always the power to accelerate learning, and make knowledge more accessible promptly.

Resta (2002) underlines that distance education systems can be able to use new tools for learning to gain the full benefits of cutting-edge communication technologies. These emerging technologies, however, can challenge the existing systems for switching knowledge and create numerous problems, which make a distance learning process undesirable. For these reasons, it is crucial to break through the arguments between low-tech and high-tech communication technologies. Radio as a one of low-tech educational tools can increase the quality and speed of learning. Moreover, radio in distance education systems make learners control their times, because most of people have one in their homes, in their cars as well as in their jobs. If any distance learners do not have one yet, they can purchase a new radio with very low price, and they do not need to have new skills learn how to use radio. Finally, distance learning is indispensable part of the life learning and high tempo life styles. (Moore & Tait, 2002) Focusing on the use of new communication technologies in distance education systems, elearning educators and trainers give up relatively to work with radio as a low-tech educational tool. Radio has a unique power to create better interactive distance education environments itself than do emerging communication technologies, which can empower the capacities of radio when being used together in distance education systems.

First of all, to create better interactive distance education systems in the 21st century, there is an imperative need to characterize the roles of radio, as an educational tool by redefining the concept *poverty* and its sources.

The Sources of Poverty in Today's Society

Paulo Freire, Brazilian educator, did delve into miscellaneous issues of human consciousness, the origins of knowledge and the meaning of freedom, and highlight that "*…I didn't understand anything because of my hunger. I wasn't dumb. It wasn't lack of interest. My social condition didn't allow me to have an education. Experience showed me once again the relationship between social class and knowledge…*". (Gadotti, 1994) Freire gained a deep understanding of the effects of socio-economics on education. However, the domination, aggression and violence of social life (Gadotti, 1994), and time with the high rhythm of our mutual postmodern lives are the basic elements of being human in the 21st century. Learners are the victims of not only oppression, but time as well. While beliefs, political affiliation, national origin, age, size, and physical and intellectual handicaps are the most salient forms of domination (Gadotti, 1994), the most prominent structure of working, studying, learning, sparing and/or wasting time is personal freedom. Today's societies, therefore, are in transmission to construct dynamic learning communities, which require effective political strategies, philosophical approaches, and technology plans for lifelong learning. Besides, physical, psychological, socio-economical powers and time forces are increasing the expenses and limitations of living in a knowledge-based diverse society, because the cutting-edge communication technologies come into greater use. In this point of view, to become more flexible and open to manage new technology-based problems in distance learning, radio, as a low-tech communication medium, is an inevitable position in elearning milieus to inexpensively build knowledge-based networks among distance learners and resources in a short time.

To understand why radio is one of the most important elearning tools in distance education systems, the term *poverty*, based on a socio-economic consideration having a restricted meaning, needs to be redefined derived from the high rhythm of life styles in the 21st century. Kurubacak and Yuzer do explain that *poverty* is the boundaries and intense consequences of time with high tempo life styles on shared power in learning. Based on this definition, the sources of poverty are the physical, social, psychological, economical, and political backgrounds of people shaped by time. Poor and dispossessed people, consequently, are dominated by the race, class, gender, age, language, religion, national origin and size concerns, and physically, socially, psychologically, economically and intellectually impaired people (Giroux, 1983) as well as time.

Radio in distance education systems must provide quality-learning services to learners oppressed by the sources of poverty in the 21st century. To better understand and construct the societies via interactive radio programs, it is crucial to focus on the strategies for managing knowledge and creating knowledge networks among societies. These strategies can enable learners to interact wisely with all knowledge resources from around the world and around the clock. These are: 1) being aware of building *multicultural learning* environments to transfer gradually more overwhelming amount of knowledge among diverse learners, 2) dealing with the quandaries of *digital diversity* created by the powers with the emerging communication technologies to build knowledge-based network societies, and 3) promoting the *critical thinking* skills of people to take the risks and responsibilities of the high rhythm of life styles to manage knowledge from diverse resources. Multicultural learning, digital diversity and critical thinking are the foundations of interactive radio programs in distance systems to overcome the sources of poverty.

All distance learners from the world to promote greater multicultural understanding through elearning across interactive radio programs can develop a greater understanding, compassion, and appreciation of themselves as well as for other people. The most essential role of multicultural radio programs is to provide safe learning settings. Distance learners, therefore, feel secure in the elearning milieu with learning from a range of viewpoints without paying usual high cost for equipments. Besides, interactive radio programs in distance systems allow to share and exchange diverse resources from content experts, the experiences of other elearners and digitized information in detail. (Mason, 1994) The use and integration of radio in distance education promote cross-cultural collaborations, national and international interactions and partnerships among educational institutions, business, and the public. Finally, the physical, socio-economical, political, religious and psychological characteristics of individuals, and also gender, age, size and/or disability issues of them cannot be visible to other end-users; so that radio can provide better multicultural flexibility and openness for learners from the gigantic distances than the cutting-edge technologies can.

Interactive radio programs in distance education do offer the same learning opportunities and equal possibilities to access overwhelming knowledge easily to distance learners. These potentials and benefits of radio extend the digital borders of elearning from not only economically but also educationally wealthy areas to the disadvantaged locations around the world. Especially, needless to say, empowering equal access to knowledge inexpensively from diverse resource is unquestionably the most important advantage of using radio in distance education. This is evenly excellent for rural and/or isolated learners and for the learners in the cosmopolitan areas with no time to attend the learning sessions of new communication technologies. Radio, moreover, provides life-long learning, professional updating, in-service training and community education from a cradle to the grave position, which is independent of not only place but time as well. (Mason, 1994) Learners, for that reason, can gain knowledge about themselves without feeling any digital diversity to share and exchange their experiences with others to promote their understandings with other learners from different culture.

Interactive educational radio programs construct collaborative life experiences for the learners at a distance by providing cognitive apprenticeship network. These active knowledge constructions with radio get ready learners for a rapidly chancing world. Using time efficiently is the most essential problem in the 21st century, and also it depends on how distance learners adjust themselves this continuously chancing world. Thinking critically helps essentially distance learners solve problems, make decisions, analyze and evaluate beliefs and ideas, and give reasons in their daily lives. Critical thinkers are independent learners who wonder about the essence of truths, clarity and arguments, and the impalpable of facts, principles, skills and concepts. Utilizing this progression, interactive radio programs in distance education promote better the self-confidence and the personal and intellectual growths of learners in this century than new communication technologies do. Radio can extends inexpensively the borders of distance learning environments to emphasize the equality of tolerance combined with a strong wisdom of values, ethics and morals. The improvement of these qualities empowers learners to find various systematic and logical approaches of the high tempo life in the 21st century. Learners, moreover, discover how to take greater responsibility for their lives.

Interactive Radio Programs in Distance Education

Technically, radio is a low-tech tool to transmit signals via the modulation of electromagnetic waves, which travel through air and vacuum space equally well, and do not require a medium of transport. (Dictionary & Encyclopedia, 2004) From the social and communicational point of views, radio is defined as a mass medium, which sends audible messages to its potential listeners. Voices, music, and effects constitute audible messages.

Educational radio in distance systems broadcasts educational-based presentations and/or programs. Traditionally, a distance learner studying with radio listens presentations in one-way communication broadcastings that there is no interactivity in this learning milieu. On the other hand, providing at least two-way communications to create interactive learning setting, interactive radio becomes an interactive tool for learner to direct educational programs, which create an effective interactive circuit from medium to learner and from learner to medium. Based on this understanding, interactive educational radio in distance education is defined that radio has potential to direct distance educational programs with the cutting-edge communication technologies for its prospective learners.

Telephone and telephone lines, for examples, are used to create radio-audience and audience-radio circuits in distance education system, which learners have chance to reach instructors for sharing their questions, and reap necessary commands about the content they are working with distance interactive radio programs. These kinds of interactive programs are broadcasted in live broadcasting techniques to reach instructors at the time. Like the other technologies, the telephone technologies, such as cellular phones, mobile phones, GSM etc. has been improving day after day for many years. Integrating the telephone technologies in interactive educational radio programs gives for learners to communicate with their instructors on the radio program. Also, taped broadcasting techniques can be used for interactive educational radio such as the audio-on-demand programs. Besides, using free-cost lines about calling or using sending messages from learners to instructors encourages end-users to use these telephone devices with radio in distance education.

Not only telephone and cellular telephone related technologies, but also the Internet and its applications, such as emails, bulletin boards, e-portfolios, course Web pages, etc. can support interactive radio programs to create learning environments for learners to interact with their distance instructors easily. Besides, the Internet technologies are able to broadcast distance educational radio programs synchronously and/or a synchronously, and also store them in e-archives for learners to access knowledge anytime and anywhere. Moreover, learners can speak with course instructors and/or e-classmates via the integrated multimedia technologies of the Internet in distance educational radio programs. At the same time, everybody in this distance course can hear not only instructors but also their classmate voices on their radios. Email is also one of the other easiest ways to collaborate with instructors and learners in the same distance program. Learners in interactive radio programs can communicate with instructors to ask their questions, discuss on the topic, share their ideas etc. via regular and/or the Internet-based fax. The best way in any distance education systems is using the mixture of the technologies given above for creating interactive educational radio milieus. Therefore, it has various opportunities for distance learners to select the most appropriate learning media depends on their life styles.

The Building of Knowledge Networks with Interactive Radio Programs in Distance Education

Radio supports knowledge acquisition to help learners become knowledge constructors. Radio, an interactive educational media in distance education, has the potential that learners can be engaged in articulating intentions, collecting and interpreting information, building and representing a new understanding, and reflecting about what s/he was learned. (Jonassen, 2000). While learners are listening radio programs, they can visualize verbal objects, concepts, facts, dramatizations, events, etc., and also control and extract their meanings in their minds. This abstract visualization process help learners think critically about their learning processes and scaffold their ideas and opinions on the discussion topics. Besides, learners in this process can discover how to empower meaning-making with empowering their dreams with abstract mental images.

An important aspect of professional development radio programs to knowledge construction is that course content can be broadcasted synchronously and/or asynchronously. Therefore, approaches to the professional delivering of interactive radio programs in distance education must depend on learning theories and the context and culture of society.

Synchronous and Asynchronous Interactive Radio Programs in Distance Education

Learners can share and exchange their ideas, beliefs, opinions, knowledge, and information with others in interactive distance educational radio programs synchronously and/or asynchronously. Synchronous and asynchronous communications support distance interaction among learners, instructors and resources in their courses. (Crisell, 1994) Also, learners and instructors can collaborate with any experts and learners from any places in the world. They have freedom to move outside from their environments to interact other resources from other places.

Synchronous education allows all distance learners taking their educational session at the same time, and interactivity occurs at same time. Synchronous communication in interactive distance radio programs allows live interactions among learners, instructors, experts, resources, etc. (Bonk & Cunningham, 1998) The synchronous model of interactive radio programs in distance education systems is closely related to the regular lifestyles, experiences, and expectations of instructors and learners. Accordingly, verbal clues during synchronous discussions can be problematic in interactive radio programs in distance education. Besides, nonverbal cues, such as body language, mimics, etc., and other social context cues associated with face-to-face conversations can be missing in synchronous interactive radio program. Therefore, the Internet-based emerging communication tools, such as emails, bulletin boards, etc., provide more reflective and useful interactions among learners, instructors and resources. (Picciano, 2002) Also, synchronous interactive radio programs supported by written communication activities allow learners with time-independent interactions to focus on the content provided by messages.

Asynchronous interactive radio programs have potentials that learners do not have to take their educational session at the same time. They choose the most appropriate time to take the session with interactive radio. Therefore, asynchronous communication methods allow learners to contribute at their most convenient time to analyze and reflect their ideas on the discussion topic. (McLeish, 1999) Especially, asynchronous interactive radio programs eliminate direct lecture transmissions, and also involve instructors in supporting, evaluating and engaging distance learners in different ways. Asynchronous communications with distance interactive radio programs tend to be longer than synchronous situations with more knowledge from many resources. For that reason, distance learners must be more attentive to discussions and collaborations. Asynchronous discussions, debates, and collaborative efforts provide a more flexible and sophisticated atmosphere for distance learners who share and exchange an interest in the specific topic. (Jonassen, 2000)

It is possible to deliver synchronous and asynchronous interactive radio programs in distance via live and/or taped-broadcasting techniques. While live broadcasting is the most appropriate technique for synchronous interactive radio programs, taped-broadcasting technique is the most suitable synchronous ones. (Keith, 2000) To create interactive circuits with distance educational methods, radio broadcasting techniques and other emerging devices, radio program producers in distance education can generate different interactive educational radio programs. In view of the fact that, there are no boundaries for imagination, there are no restrictions about creating different types of interactive educational radio programs. It is just limited with the imagination of human.

The Footprints of Interactive Radio Programs in Distance Education

All communication media (such as radio, TV, computer, the Internet etc.) has been living with us since they were invented. Although the impact of cutting-edge communication technologies transforms distance education systems and affect on other media developments, all media move in their lanes without putting barriers on others in the communication history. Therefore, it is very imperative for distance education designers to grasp the emerging ideas and applications of technologies. (Marquardt & Kearsley, 1999) For that reason, radio has always a place in interactive distance educational systems. Moreover, new communication technologies have not better characteristics (such as user-friendly, inexpensive, accessible, etc.) than has radio.

Radio is called as a *blind* medium. (Keith, 2000) There are no image and visual signs on radio broadcastings, but audio. This feature is usually mentioned as the weakness of radio. This, however, is the one unique quality of the radio that distance learners attempt themselves to visualize everything what they listen. Therefore, imagination occurs in the mind of learner, and they construct knowledge themselves. Unlike any other emerging technologies where all visuals are limited by the screen size, the pictures from radio can be any sizes; because distance learner care to make them. (McLeish, 1999) Constructing imaginations without boundaries is extremely crucial in the distance education systems, because this process encourages learners strongly to think critically about what they hear

Radio is much inexpensive educational medium than other communication technologies that no one is less costly to use than radio for distance education system owners and end-users. Moreover, learners are equally fortunate, because they do not have to buy or rent costly equipment themselves, nor do they incur expenses and devastate time in traveling to a center to use someone else's. (Rowntree, 1994) There are no boundaries to send educational programs with interactive radio in the worldwide. Consequently, learners do not need to worry about missing the programs wherever they are in the world. If learners have a very low-cost radio, they can listen the programs delivered by distance education institution everywhere. TV and the Internet have relatively this aspect; but they require more complex and expensive apparatus than radio does. For example, if a learner wants to enter the Internet, s/he must have a computer first, and then access knowledge via an Internet line. The speed of Internet connection is very important to access knowledge with stream videos, audios, etc. without causing delays in the content. However, if a learner wants to interact with a radio program, s/he needs some extra devices, but not the expensive ones. For example, telephone is the easiest and inexpensive way of producing and broadcasting interactive distance education programs with radio.

Distance learner can listen interactive distance radio programs nearly everyplace. For instance, in the high rhythm of daily life, people have to travel from place to place to visit their relatives or friends, go to works, etc. Radio offers an opportunity for learners to listen the sessions from radio when they are riding their cars, traveling by bus or train, working at home, workplace, etc., stacking in traffic, jogging on the beach and so on. Moreover, interactive distance educational programs can be recorded for learners via inexpensive equipment, such as tape cassettes, CDs, or MP3. There is no time limit for audible lessons.

Discussions and Recommendations

Radio is a forgotten medium in the 21st century. New communication technologies impact on delivering knowledge with expensive and complex equipment in distance education, which has always been driven by economical arguments. (Bastiaens & Martens, 2000) It is assumed that the more high-cost communication media are integrated in distance education, the better interactive learning is provided. Radio with interactive learning approaches, on the other hand, has the enormous potential to improve distance education systems. Besides, emerging technologies can be coupled with interactive educational radio to empower distance learning systems.

Being people in this century is not an easy job. The more we are surrounded by new communication technologies, the more the rhythm of our lives gets complex. In this hectic tempo, learners can listen to educational radio while driving their cars, cleaning their homes, working in their office, washing clothes, doing ironing, etc. In short, apart from dangerous jobs and /or duties, learner can do other things while listening radio. Besides, interactive radio programs let the people having disabilities, except the hearing-impaired people, hear the voices of instructors, classmates, experts, etc. Moreover, radio provides better knowledge access for woman, minorities and other disadvantages learners to collaboration with each other. They can listen real-life dialogues to make their knowledge construction process more personal. Finally, while listening interactive radio programs, learners do not have to learn numerous skills; but they do have more time to construct knowledge.

Producing interactive radio programs in distance education requires only low-priced equipment compared with the cutting-edge technologies. The educational institutions do not need spend much money to establish interactive radio studios in their organizations that designing effective radio programs does not take more time than written book (Rowntree, 1994), and updating knowledge provided with the programs is easier than other emerging media. Besides, most learners have at least one radio at their cars, homes and/or jobs. To sum up, providing equal access to knowledge for everyone is the crucial benefit of distance educational radio by breaking digital walls around the world.

Freire strongly emphasized that "*I'd like to say to us as educators: poor are those among us who lose their capacity to dream...*"(The Paulo Freire Institute, 2004). Due to the pompous rhythm of life in the 21st century, poverty has becoming one of the most important characteristics of the people surrounded by the cutting-edge technologies. We, distance education and communication designers, must delve into unique learning milieus to encourage learns to think critically, to reap knowledge from diverse resources easily, and to engaged construct their own schemas. Consequently, interactive radio programs in distance education make learners to promote their attainable dreams about equality and justice as well as to access knowledge and sources easily and inexpensively. Interactive radio programs, therefore, is a unique education milieu in elearning systems. Our slogan is "*with one dollar radio, reach your dreams and make them possible*" to cope with digital diversity and digital gaps.

References

Abbey, B. (2000). *Instructional and Cognitive Impacts of Web-Based Education*. Hershey, PA: Idea Group Publishing.

Bastiaens, T. J. & Martens, R. L. (2000). Conditions for Web-Based Learning with Real Events. In A. Abbey (Ed.) *Instructional and Cognitive Impacts of Web-Based Education*. Hershey, PA: Idea Group Publishing.

Bonk, C. J & King, K. S. (Eds.) (1998). *Electronic Collaborators: Learner-centered Technologies for Literacy, Apprenticeship, and Discours*e. Mahwah, NJ: Erlbaum.

Bonk, C. J. & Cunningham, D. J. (1998). Searching for Learner-Centered, Constructivist, and Sociocultural Components of Collaborative Educational Learning Tools. In C. J. Bonk, & K. S. King (Eds.), *Electronic Collaborators: Learner-centered Technologies for Literacy, Apprenticeship, and Discours*e. Mahwah, NJ: Erlbaum.

Crisell, A. (1994). *Understanding Radio*. Second Edition. New York: Routledge.

Dictionary & Encyclopedia (2004). http://www.wordiq.com.

Gadotti, M. (1994) *Reading Paulo Freire. His life and* work, New York: SUNY Press.

Giroux, H. A. (1983). *Theory and Resistance in Education. A Pedagogy for the Opposition*. London: Heinemann

Jonassen, D. H. (2000). *Computers as Mindtools for Schools: Engaging Critical Thinking*. New Jersey: Prentice-Hall, Inc.

Keith, M. C. (2000). *The Radio Station*. Fifth Edition. Oxford: Focal Press.

Marquardt, M. J. & Kearsley, G. (1999). *Technology-Based Learning: Maximizing Human Performance and Corporate Success*. New York, NY: St. Lucie Press.

Mason, R. (1994). *Using Communications Media in Open and Flexible Learning*. London: Kogan Page.

McLeish, R. (1999). *Radio Production: A Manual for Broadcasters*. Fourth Edition. Oxford: Planta Tree.

McLuhan, M. (1964). *Understanding Media.* New York: McGraw-Hill.

Mercer, N. (1995). *The Guided Construction of Knowledge. Talk among Teachers and Learners*. Clevedon: Multilingual Matters.

Moore, P. E. & Tait, A. (Eds) (2002). *Open and Distance Learning: Trends, Policy and Strategy Considerations*. Paris: Unesco.

Picciano, A. G. (2002). *Educational Leadership and Planning for Technology*. Third Edition. Columbus, OH: Upper Saddle River.

Resta, P. (Ed.) (2002). *Information and Communication Technologies in Teacher Education: A Planning Guide.* Paris: Unesco.

Rowntree, D. (1994). *Teaching with Audio in Open and Distance Learning*. London, UK: Kogan page.

The Paulo Freire Institute Web Page (2004). http://www.paulofreire.org

Wiburg, K. M. (2001). Effective Technology Planning. In G. Ivory (Ed.) *What works in Computing for School Administrators*. Maryland: Scarecrow Education.