Application 0f Distance Education in Agriculture

Seyed Mehdi Mirdamadi[1], Sharareh khodamoradi[2]

[1, 2] Department of Agricultural Extension and Education, Science and Research Branch, Islamic Azad University, Tehran, Iran
*Corresponding author: skhodamoradi2007@yahoo.com

Abstract: Nowadays, using computers has changed man's life at all aspects. Done researches in relation to development programs of all countries, represent central role of information technology and communication at these programs. information technology and communication can be used as a powerful tool for improving quality and efficiency of education so that change traditional practices of education and no more physical presence at classrooms . If so far, education benefited just from teachers and trainers, books were considered as major informational sources for education, nowadays education has faced with new communicational tools and environments. Recent progress at computer industry and local information networks, regional and international information (especially Internet) , multimedia, communicational technologies, have placed new tools and practices against planners , programmers , managers and executers of educational programs. Influence of new informational technologies on educational centers (schools to universities) and even houses, have changed simple relationship between students and teachers completely.

Introduction

In this order, traditional learning samples have changed and users is faced with large extent of information and knowledge. Now, most countries which are leading at the field of telecommunications are establishing and operating virtual universities and class or developing their traditional systems. Establishing and managing these organizations would have some problems and challenges in addition to its benefits. But what is obvious is that virtual universities are suitable place for emergence of talents and innovations. At farming, we deal with learners who have unique features. Learners who are mostly adults and all responsible of their family life. Adults, who have been far from educational studies for a while, would need to review required skills ranges by studying again. They need to increase their required skills for their life and work by spending least time during learning. One suitable solution can be Distance education (Ismaili, 2010).

Definition of Distance education:

Distance education refers to those systems which relation between learner and teacher is through communicational systems. So in this system there isn't any time and place restriction for learner. At the other hand, in these way educational materials is available for learner through multimedia so that they benefit from this education without attending class, effectively. Generally, Distance education begins with corresponding method and these kind of education also progressed in accordance with science and communication technology progress. So that after corresponding method, using Radio ,TV and Video taped were common and after diffusion and development of personal computers and fast growth on multimedia equipments and especially emergence of internet (through various electronics tools (internet , intranet , satellite networks , video and audio tapes and CD-ROMs) was distributed and being operated by different methods (courses, modules, low learning activities) and its operation is without any geographical and time constraints (asynchronous and simultaneous learning) that great change emerged on Distance education (Grimes, 2003).

History:

Distance education organizations, are established base on their special educational needs in each country. In Australia, broadness of country and decentralization of population were most important factor for emerging and prevalence of Distance education. In china and India, base factor of tendency to Distance educational system are: population density and lack of dynamism and budget of educational organizations (Rasouli, 2010).
In USA, England, France, Germany and Japan, adult education issue and its continuity and also familiarizing with new sciences and skills are among most important factor for establishing Distance education organizations. In African countries,

economic problems caused that Distance education being common as a cheap system and partly replaced by traditional education system. In Iran , also due to broadness , decentralized population , great number of villages and existence of nomadic population and also young population (that even are bigger than whole population of some countries) has made it necessary to apply Distance education(Anonymous, 2010).

Tools such as slides and animation entered to classrooms as an educational assistance tools and emergence of TV industry made milestone at evolutionary process of education, at the other hand it caused that education theorists and experts release from traditional corresponding education environment and simultaneously use TV for education. At recent decades, range of activity at the field of education and learning like other scientific, cultural, economical and social activities has changed and affected by fast development of technology and emergence of phenomenon such as satellite, computer, internet ant etc (Information society - information technology, 2010).

History of electronic education in Iran refers to time of using audio and visual educational assistance tools such as slide showing and educational films at classrooms. After that, TV was considered as an educational media and Iran national TV del with public education across the country formally. After entering computer industry to Iran and growth and influence of personal computers among different social-cultural groups, activity at the field of computer-base education began. And now it is more than 10 years which this activity continues and these issues were begun by producing educational CDs.

First corresponding schools were founded about 1892 at Europe that they paid to teaching foreign language and stenography through Post. License of first collegiate educational Radio issued at 1921 that was considered as a first base for forming electronic education. At 1960 Distance education technology was changed, by evolution and development of media, and universities enroll students by combinatory application of multimedia tools and official structures for supporting education. Personal computers and internet, caused recreation of education appearance and they have provided learning for students from Distance. At 1980, TV broadcasting was changed be satellite emergence and caused revolution at electronic education industry ((Ismaili, 2010).

By emergence of internet, first course of undergraduate was provided by technology institute of New Jersey at 1984 through online system. Within this, electronic education in Iran was considered by science, research and technology ministry. At 2001,

virtual education site of Tehran University began by providing 9 lessons for students, daily. At 2003, first educational organization dependant to Shiraz university was established and at 1386 this organization changed to college according to developing educational activities and increasing number of students. Now, most of well known university of country, has established their electronic education units as a virtual education center. First unit which was pioneer for establishing and applying Distance education at Iran, is PAYAM NOOR university. Universities and organizations of country , began their activities at the field of learning electronic within 1998 to 1999 averagely . generally , after second half of year, approach to this item was more serious and operational activities at the field of internet education and using telecommunication width band was began for providing educational courses across the countries(Jeffres, 2005).

Benefits of Distance education :
 1- religious and cultural differences ;
learning from Distance considers religious, cultural, racial and ethnical differences. Nowadays, theses differences exits at most part of world and are among factors which causes problems at schools and educational centers. Distance education can consider these issues and teach according to learner. Also Distance education can develop time chances for education.
 2- education for everyone and everywhere;
in this education , learner's access to course content isn't depend on time and place. Internet can be logical solution for organizations and provide their access to educational goals. Through computer networks, access to electronic education can be forever and there isn't any limitation for clerks , students and also other people. Just base need for using computer-base education and Online education is having one computer. At electronic education , people are able to learn their needed information in all time of day and week(Rasouli, 2009).

3. Update education;
For production education organization and companies, important subject is training forces according to progress of technology in order to make them ready to enter competitive market and for earning more revenue. In electronic education , educational managers can change their educational page and content according to needs of society and marketplace moment by moment while in traditional education, level of reviewing and changing content last even months(Chizari and linder, 2002) .

4- population increase
One of main challenge of less developed countries is social, economical and cultural imbalanced growth

of different parts. Distance education has affective role as a one of strategy for establishing balance by offering various trainings.

5.   chance for deprived areas
Distance education provides more educational chances for residents of deprived area especially at different field of girl's education .

6.   affection on public culture
since that Distance education provides especial options for Provinces so each province can deal with programming for its subsidiaries parts according to geographical conditions and status. And by establishing educational centers at different parts ,increase education cover level at secondary and high school especially those areas which face with limitation for access to education. Therefore this kind of education is field for reinforcing public culture at one hand and existing subculture at the other hand in this area(Labani, 2009).

7.   flexibility at time and place
main advantage of electronic education is that allow participants to set their programs. Flexibility allows them to decide wherever and when to study and how long spend for learning. In this method, education flow isn't against with work plan , social and cultural condition and even with family responsibility of participant. Having no limitation for boarder and time, being provide possibility of learning everywhere and for everyone are among its unique features(Barron, 2002).

8.   girls and women's access to education :
at village usually there is some limitation for girls and women's education ; because often there isn't possibility for learning higher than primary school at this villages . so they have to go to bigger villages and next cities. Now if it is possible to provide electronic education facility at houses or at least at their villages , so they would able to learning and also it is possible to teach them other life skills such as housekeeping, farming, ranching and etc .

9- developing justice and equality
Electronic education , typically creates justice and equality among different groups at different parts by establishing equal terms for all learners. Developing or less developed countries can decline their gaps with industrial and developed countries, By using this kind of educational method . also electronic education at village can decline gap between city and village and creates new hopes at rural society in order to dynamism at the field of production and efficiency and also cause economic growth(Badragheh, 2006).

10. prevent migration:

Now, major part of villagers especially youths migrate to cities due to various reasons such as education, job and etc that this issue has caused some problems both at cities and villages. While, there is possibility for job and education at villages through applying ICT , not only it prevents migration but even some of them return to their previous location.

11. immediate access to high volume data :
Ease of access to high volume data and existing knowledge at the world and immediate and timely access to information are among its benefits.

12. using limited numbers of available educators:
Distance education , uses limited available educators optimally especially while we faced with educational personnel shortage or those who learned related education with need. At this educational system, educators focused on geographical direction and student are able to communicate with their teachers at education center directly or through telephone or Post(Parrott, 2005).

13. reducing costs
Distance education has high costs at first. But over time it would decrease by equipping educational centers and producing educational content such as tutorial book, educational assistance books , work and practice, VCD, VHS, and multimedia CDs and would lead to saving costs(Bates, 2000).

14. help workers and disabled persons :
Distance education is good channel for educating workers and persons who less enjoy physical abilities.

15. emergence of learning :
Need to basic lessons can be planned as concentrate form and can be applied for removing emergences and facilitating learning through different methods(Carter, 2001).

16. without fear learning :
Students who register at one online course, have entered to risk free environment that can test them at new cases and make mistakes without impose themselves against other's judge. This ability is valuable for student experience skills such as decision making and guiding. Risk free environment , would increase student's self confidence and productivity(Rintala, 2002).

17. Update education :
For organizations and production-education companies , main issue is training forces according to the technology progress in order to make them ready for entering competitive markets and earning more revenue. In electronic

education, educational managers can change their pages and educational contents according to society and marketplace moment by moment while in traditional education reviewing levels and changing contents , lasts months.

18. simulating educational environments :

Electronic education is able to create all various educational environments according to different softwares and offers to users. At this kind of education , users are able to enter to places which really is hard to access and they are able to use educational assistance base on their needs(Romiszowski, 2000).

19. overcome on Physical gap

They overcome on physical gap By Distance learning. Learners living at faraway regions who aren't able to attend physically at schools and also learners and educators who are far from each other , can learn needed educations by using benefits of this system(Bolton, 2002).

20. costs saving

At electronic education , travel costs and costs related to professors and advisors would reduced and prevent time waste. At this education, educational courses can divided to short sessions and offers at more days and weeks instead. At electronic education, organizations will not lose their staffs and employer's efficiency would increased (Labani, 2009) .

21. forever learning

Distance education prepares field for all students and those who interested by providing them various educational facilities in order to actively deal with education constantly and also with additional efforts and always increase their knowledge level or coordinate their knowledge with global knowledge and indeed reach to forever and constant learning.

22. continuing education of women and mothers

Since that usually there are some especial conditions for mothers and women which prevent them to learn (housekeeping, cultural problems of child care and …) so this method is new way for them(2010).

Disadvantage of Distance education :

1. low level of personal computers (PC) per capita in country : unfortunately , there isn't formal and exact statistic about number of PC in country yet. However it seems that there is increasing number for PC but yet due to different reasons , PC wasn't considered as basic home appliances. For example It can be mentioned that : high relative cost for buying PC, lack of knowledge about its potential capabilities, regrettable low level of computer literacy even among educated persons and professors which consider PC as a decorative device or toy at house or office. Or some negative and cynical attitudes toward entering PC and internet to home environment that maybe be due to low computer literacy and lack of knowledge about its useful capabilities(Pierre, 2004).

2. **low rate of access to internet global network at country :**
   access rate to internet at Iran is very low even compared to same developing countries. However there isn't any exact statistics for that but base on most optimistic surveys, just 2,000,000 persons access to internet however it is predicated that this number reaches to 15,000,000 until third five year plan.

3. **relatively high primary cost :**
   among abovementioned essentials , preparing hardware and communicational necessity is very costly which sometimes is hard to prepare. This issue is more significant at developing countries.

4. **continuing communication and supporting costs :**
   cost of using Internet isn't one time forever and its cost ,continue over time. Cost of telecommunication subscription and supporting computer can be problematic for persons and organizations and cause that they face with high costs.

5. **need to computer literacy:**
   in order to enter to electronic education , first step is dominating on computer , at the other hand , in order to access to electronic education we need to computer as a main education tools and everybody learn to use it. Because at this sense, electronic education would manifested. Now, In our country, providing electronic services is developing daily but it isn't inclusive yet due to lack of people's aware of these services. at most part of world starting point of internet is new and most persons aren't familiar with this environment and facilities. so, computer aversion make affairs more difficult and makes them far than ever(Badragheh, 2006).

6. **education by non-native language :**
   most information and articles , exist at English language on internet , which we should have language proficiency in order to understand them. Moreover, many ethnic groups living at different rural area of country , that even using some subjects and Persian educations are difficult for them , and maybe some subjects being unfamiliar for them.

7.   resisting against change :

because , technology contains big changes at designing method and applying education , so it has created large resistance among persons and organizations. Reasons of resistance against change is different such as : fear of unknowns , need to effort at learning new subjects , losing power and prestige due to role changes and disagree with new beliefs.

8.   affects on village life and context

certainly, presence of ICT at villages has affected rural context and maybe affects on family's form. Presence of this technology create critical condition due to capability of accepting is lower at villages. Also maybe while villager's knowledge level increase so he desists farming and deal with non-productive affairs which this problem has more possibility among youths.

9.   lack of suitable infrastructure at country :

 all governmental and private efforts would result usefully in relation to electronic education if primary infrastructure and facilities being available across the country. In order to access and search in world wide web, we need to hardware , software and communicational facilities undoubtedly which preparing them can be cheap or expensive base on conditions . this fact is acceptable for all that we can use electronic education well , when learners and teacher have easy and orderly access to computer and connection to web. This problem isn't exist at cities of developed countries but exist at rural and urban area. When we consider whole advantage and disadvantage of Distance education , we would find that disadvantage are more than disadvantages. But this dose not mean that forget disadvantages(Rasouli, 2010).

Necessity of using Distance education by Internet at agriculture:

This is a question that how we can decline digital gap between villagers and burghers that needs high thinking. But simple answer is that electronic education and creating infrastructure and fields , and making it applicable at villages can be prevent creating barrier between urban and rural , and would provide motivation for staying at village and help for economic of country at the national and international fields. Recently, Agriculture magazine (Corp) assessed more than 350 farmers in relation to using internet orderly(Strain, 2004).

 About 75% of these farmers have more than 500 hectares. Next, 44% started using internet and also enjoy credit cards. This analysis shows that farmers more using internet for more easement of buying inputs and selling productions and even receiving various data by increasing busy of work and even

under cultivation field. Technology at production process , and value of goods efficiency can increase . so , time technology can be affective if user use it for tangible interests. If electronic education contains applicable data and global knowledge , so farmer not only can increase his/her productions but also is able to improve his/her life level from different aspects. For example, if farmer can gain proper data about seed of his region, most suitable time and planting principles , number and cycle of watering , suitable time for fertilization through electronic education and use them properly so undoubtedly he would able to improve his life condition through increasing productions and also can prepare better condition for his family. We can return dynamism to rural life by taking new technology to village and nativization these technologies and base on that , educating villager for affective using of these technologies and so decline deep technologic gap between rural and urban that everyday get deeper , then we would be able to prepare following rural development(Rasouli, 2009):

- completing knowledge and improving character of rural society members
- growth public knowledge of villagers about saying beliefs around their fates and society
- growth of useful ideas about self-help and cooperation of rural societies
- Growth of productivity on rural society members and try to discover potential resources
- Villager's maturity for identifying and solving problems about their societies and themselves
- Growth of villager's technologic data for systematic choosing and using and premier production methods

Using electronic education at agriculture of Iran

 From sense of growth at IT fields ,Iran are among those 50% which retarded from rapid informational revolution caravan . Iran population at 2004 has been 66991500 which about 23 million live at rural area. About 5 million internet users exist at urban area of Iran but limited numbers connect to internet at villages. Until a few years ago , most peoples were not familiar with IT concept and some people defined it as computer and internet. Informatics officials of country were not excluded from this principle and applied many plans to show their activities at this field that maybe just few numbers was included as IT definition. But fortunately , at recent years , newspapers and news agencies by establishing IT services , officials by different plans and organization , individual and legal persons by performing

innovative plans and establishing informative web ; had participated on introducing IT to people and using it optimally in order to improve efficiency. at the global information society summit that was held at 2003 and Iran was signer member of this law and it was prescribed that signers countries connect Universities up to 2005, hospitals up to 2010 and all villages up to 2015 to internet. Villages are retarded traditionally and it isn't good from social sense that we give all facilities to cities. At 2000 , first internet village "SHAHKOOH" which is one of big village of Golestan province was entered to virtual world. This action that was due to 2years project , has deep affection on rural life at the economical , social and cultural fields. Farming improved and people found that it is possible to enter to market without dealer , then analysis its logic and buy everything and sell too. More than 500 persons at the village which accommodates 300 families have passed computer and internet course and large number could pass get license from technical-professional organization.

Second internet village is GHARNABAD at Golestan. At 2004 , first inclusive IT user services was opened there. Residents are same residents from SHAHKOOH that spend their summer at SHAHKOOH and their winter at GHARNABAD.

ICT ministry decided to equip 10,000 villages of country to rural ICT offices at the national plan. These offices provide Post bank , telephone, and other governmental services further connection of those village with Internet .

Necessity of communication at Distance education:

since that we have less face to face communication at Distance education , so some principles should be considered at this kind of education. Holmberg (1989) knows that this education as directed dialogue and considered it 7 assumptions:

- bilateral relation should be created between learning and teaching
- advanced materials for organized self learning being existed
- learning task should be fun
- law and language atmosphere should amplify friendship dialogues
- message which is received by learner should be as dialogue form and be understandable and maintainable at memory
- Distance education should be as dialogue form always
- Programming and leading is necessary for organized studying

We can easily see that Holmberg has humanism sense.

Results and suggestions:

Government and other related organizations should make decision principally and by planning at the field of internet emergence at rural area. Unfortunately, most planned programs at our country is short term and sectional. We should see this issue by broader vision and at least have twenty-years approach about rural ICT. If we decided to modify or develop infrastructure of communication network so village should be considered too and also connecting them to communication network of country. For first step we can start with those villages which have phone lines. Every villagers who have phone line also should have Internet base in order that farmers can use it. Developing ICT and drawing it to village need to invest. Government should exactly specify budget and capital for equipping villages of country with this technology. Fortunately, NGOs have act well at the field of ICT. Government can have affective role at developing ICT by supporting this part and encouraging investors to participate at national and regional plans at the field of ICT at village and also problems which NGOs have faced .

In order to gain experience and better result , it is necessary to test electronic education at small levels at one or more villages and results being analyzed. We should act by planning and forecasting About electronic education and entering ICT to villages.

Generally , it can be said that developing policy of education at world has developed. We should consider that there are very unknown point in this education that we must realize them and use them for education villagers.

***Corresponding Author:**
Sharareh khodamoradi
Department of Agricultural Extension and Education, Science and Research Branch, Islamic Azad University, Tehran, Iran
Email: skhodamoradi2007@yahoo.com

References:

1. Anonymous (2001). history of distance education and training council (75 years). Distance education and training council washington.
2. Badragheh, A. (2006). ICT development strategies. Ronas Publications.
3. Barron, D (2002). Distance education in north American library and information science education: Application technology and commitment. journal of the Ameraican society for information science. Vol.47 ,No.11.

4. Bates,T (2000) .Technology, open learning and distance education London:Routledge.

5. Bolton, sharon Bauer (2002). Developing an instrument to Analze the application of adult learning principles to world wide web distance education courses using the Delphi technique. EdD.university of lousville.

6. Carter , A (2001). Interactive distance education: implication for adult learner, Interautional Media, 28(3), PP: 249-261.

7. Chizari, M, Mohammad ,H and linder ,J.R (2002). Distance education competencies of Faculty members in Iran

8. Grimes, G. (2003). Happy 100th anniversary to distance education. Retrieved August 25, 2003, from http://www.macul.org/newsletter/1992/nov, dec 92/going.html

9. Jeffres, M. Research in distance education. Retrieved August 20, 2005, from http://www.ihets.org/distance-/ipse/fdhandbook/research.html.

10. Information society - information technology. (2010). Digital divide town and village with ICT offices. Available on**:** http://isna.ir/ISNA/NewsView.aspx?ID=News-1501658.

11. Ismaili, M.. (2010). Education Management**.** Available on**:** http://www.tebyan.net/index.aspx?pid=141092**.**

12. Labani, A. (2009). Distance Education. Available on: http://www.ikdec.mihanblog.com/post/6

13. Parrott, S. (2005). Future learning: Distance education in community colleges. ERIC Digest 95-2. Los Angeles, CA: ERIC Clearinghouse on Community Colleges. ED 385 311.

14. Pierre, P. (2004). Distance learning in physical education teacher education. Quest, 50(4), 344-356. EJ 576 391

15. Rasouli, F. (2010). History of distance education in the world and Iran**.** Available on **:** http://educationrasoly.blogfa.com/post-14.aspx.

16. Rasouli, F. (2009). A different approach in designing e-learning. Available on: http://educationrasoly.blogfa.com/post-6.aspx.

17. Rintala, J. (2002). Computer technology in higher education: An experiment, not a solution. Quest, 50(4), 366-378.

18. Romiszowski, A. (2000). Telecommunications and distance education. ERIC Digest 93-2. Syracuse, NY: ERIC Clearinghouse on Information Resources. ED 358 841

19. Strain, J. (2004). The role of the faculty member in distance education. American Journal of Distance Education, 1 (2).

5/7/2011