

Enhancement of Multimedia Programs to Improve the Quality and Efficiency of Distance Education

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Abstract—This article is based on giving basic information about developing multimedia programs with the purpose of suggesting strategies for challenging high standard in distance learning programs at higher education level. At present, distance education is becoming an important part of education system in globalization. Every institution is focusing on challenging and offering their educational course through general as well through distance education devices in order to make market for its programs. There is a major goal and need to introduce quality distance education programs.

Keywords—multimedia programs, text, audio, television, computing, educational tools, distance education, internet, computer technology, collaboration, video technology

I. INTRODUCTION

The reform and improvement of the system of lifelong education in our country, which is on the path of independent development, the introduction of advanced pedagogical and information technologies and increasing the efficiency of education, have reached the level of state policy.

Continuing education is a deep, comprehensive education, an ideal combination of various forms, methods, tools, techniques and areas of study. The interrelation of its various components, the rational use of certain methods and techniques in the educational environment ensure the quality of lifelong education.

In the developed and developing countries of the world, the informatization of education is given special attention. In this regard, ways of developing education, increasing its efficiency are being sought, the issue of introducing new information technologies in education is gaining popularity.

Currently, all educational institutions are equipped with modern computer and telecommunication equipment. This requires a new approach to the work of teachers. In conditions when state educational standards are being introduced in our country in accordance with the tasks set in the National Training Program, the use of new generation teaching aids for the high-quality organization of the educational process in educational institutions will serve as the basis for a more rapid development of teaching technology.

Teaching students and retraining on the basis of multimedia is one of the most pressing problems of our time. The concept of multimedia entered our life in the early 90s. The question arises, what is it? Many experts interpret this term differently. In our opinion, multimedia is an integrated type of delivery of educational materials to students, based on the effects of audio, video, text, graphics and animation (movement of objects in space) on the basis of computer science software and hardware. In developed countries, this teaching method is currently used in education.

Teaching students with multimedia has the following benefits:

- 1) there is the possibility of a deeper and more complete assimilation of these materials;
- 2) the desire to keep in touch with new areas of education will increase;
- 3) Achieve time savings as a result of reduced training time;
- 4) The knowledge gained is stored in the memory of a person for a long time and can be used in practice if necessary.

Today, special attention is paid to the implementation and development of distance learning in practice. Remote organization of the educational process is a modern requirement. This tells us:

- 1) Reach a large audience at the same time;
- 2) Organize a regular, fast, convenient and effective exchange of information between teachers and students;
- 3) Provides the opportunity for students to work independently. One recognized distance education researcher commented: "Since technology as delivery systems is critical to the growth of distance education, research reflects, not guides, practice." She goes on to explain that this form of study has evolved from a specialized form of study into an "important concept in mainstream education". [1] One of the reasons that distance education has become and remains so widespread, especially for higher education, is that various studies confirmed his practice - not revealing significant differences in learning outcomes between traditional and part-time students. A recent study published in 2005 found this to be the case. when comparing students who were presented with the same content using one of three settings: traditional classroom, online course management software, and CD-ROM, respectively. The authors did not record significant changes in overall student satisfaction between the three groups. [2] A twenty-year meta-analysis released last year went so far as to claim that 70% of the time students, distance learning courses actually outperformed their peer students in traditional instructional courses.[3]. It is clear that distance education will remain as a form of education and its expansion continues to change the landscape of higher education. One definition of distance education, dating back to 1990, described the use of two-way electronic communications as a central tenant. [4] It is safe to assume that almost all current distance courses, even those that extend to the most remote regions, include the use of communication technologies in their implementation.

II. METHODOLOGY

There are major Distance Education Technologies that are really important for utilizing distance learning system such as email, Online Collaboration: Internet Chat and Conferencing, video technology, Videotape and DVD, Satellite Videoconferencing, Microwave Television Conferencing, Cable and Broadcast Television, video technology and etc.

As the use of the Internet continues to grow throughout the world, computer technology is becoming more and more popular. is becoming more commonplace in distance learning. Online learning does not necessarily imply distance learning, as many traditional higher education institutions now use web-based course management software to aid in the learning process. However, a lot of research has been done to establish best practices and guidelines for online distance learning courses and programs. Email, online collaboration and online education have been identified as the primary computer technologies used for distance learning. Obviously, only students who have a reliable computer and Internet access will be able to enroll in courses that use these technologies.

Email is a relatively simple and inexpensive way for instructors and students to communicate throughout the course. Sometimes designers plan out an entire course of email communication.

The rise in popularity and use of the Internet has been accompanied by an increase in the amount of online information that students and teachers can access to improve learning outcomes. Now, more than ever, students can link to resources on the Internet that they once could only find in libraries or through expensive subscriptions. Teachers can take advantage of this situation and find appropriate websites for students so they can view or instruct students to search the Internet for information about a particular topic.

As we come to the video technology in distance education, it is really significant for useful, productive lesson for learning languages. Using video technology is an effective way to add visual content from a distance. educational course, although some environments can be quite expensive to implement. There are certain advantages to not only hearing, but also seeing an instructor who is traditionally lost in distance education. These include behavior modeling, demonstration and instruction of abstract concepts. Video technology is effective in incorporating these benefits into distance learning courses, and is especially useful for visual learners.

Benefits of video technology

- Allow audio and video communications. Video technology can provide the visual and audio realism of face-to-face training. This is generally considered "the best option after being there."
- Ease personal feelings. Video technology allows students and instructors to see facial expressions and body language, adding personality to communication.
- Provide a high level of engagement. Most video communication is synchronous, allowing for a high degree of interaction, Q&A, etc.
- Video technology is definitely one step ahead of audio, since additional information can be transmitted visually. Teleconferencing allows students to communicate with the instructor. almost the same as in

the traditional classroom. In addition, the recorded video can be played, paused and resumed according to the student's schedule.

- Disadvantages of video technology
- Can be expensive. Cameras and mounting hardware can be expensive. In addition, the infrastructure at each site and the links between sites can be expensive.
- Requires careful planning and preparation. To be effective, the film crew and instructor must practice and become a team. Faculty Members usually need practice and training to be effective in this area.
- Must be planned. Most video conferencing is not spontaneous. Instead, they must be planned, and the necessary resources must be planned.
- Technical support required. Due to the complexity of the video, a support team is required for recording, mixing and transferring. In addition, on-site assistants are needed to keep the equipment working properly. at receiving stations.

As noted, video technology and, in particular, satellite teleconferencing can be expensive. exorbitant. In addition, their use requires significantly more planning, preparation, and planning than audio, print, or even Internet communication. However, when used in conjunction with other forms of technology such as email and printing, they have the potential to fully engage the correspondence student in course material in a way that was once possible only through on-campus learning.

III. ANALYSIS AND RESULTS

By 2007, the school had set up a system to receive and immediately respond to text messages from students. The institution concluded that SMS did not necessarily improve performance, but their pilot tests found higher completion rates among students receiving texts. [5] Other researchers believe that cell phones can increase equity in educational opportunities around the world by removing barriers to anytime, anywhere learning. [6]

A recent publication on new technologies includes an article on the growing use of web video conferencing in distance higher education. The author notes that "although audio has been the standard for many years, the use of video for two-way communication is increasing for several disparate, overlapping and significant reasons." It is explained that at the turn of the millennium, connections to the Internet have become fast enough to support high-quality video conferencing, "and the past few years have seen higher speeds delivering further improvements in picture and sound quality." In addition, the cost structure of the Internet is such that distance between the location does not matter. Access to Internet technologies is becoming easier for both students and teachers, and, accordingly, the use of Internet communications is increasing. [7]

Moreover, although these are public sites, privacy settings can limit the number of people who can access and view an online group. The authors explain, "creating an online place where people feel comfortable and relaxed, a place that enables communication and interaction at different levels using a variety of tools, and both teachers and students

develop a strong sense of presence that can help participants gain confidence in both their own learning and teaching" [8].

Experts point out six factors to keep in mind. [9]

- Delivery and access;
- Control;
- Interaction;
- Symbolic characteristics of the carrier;
- Social presence created by the environment;
- A technology-specific human-machine interface that allows for consideration of how equipment interacts with end users.

There are the following types of multimedia applications:

- presentations;
- animated videos;
- games;
- video attachments;
- multimedia galleries;
- audio attachments;
- applications for the web.

IV. DISCUSSIONS

Students should be able to interact with the teacher and other students through some means. Interaction involves two-way communication between instructor and student and among students. Printed text and materials, TV broadcasts, podcasts and CDs offer only one-way communication (from teacher to student). Technologies that allow two-way communication can be classified as synchronous (real-time) or asynchronous (time-delayed). Audio conferencing, video conferencing, online chat are synchronous technologies that allow you to interact with each other. On the other hand, email, message boards, and voicemail are asynchronous communication technologies. which allow two-way communication.

Salomon (1979) distinguishes three types of symbol systems: iconic, digital, and analog. Iconic systems use a graphical representation; digital systems convey meaning in written language, musical notation and mathematical symbols; and analog systems are composed of continuous elements that have nevertheless reorganized meaning and forms, such as the quality of voice, performed music and dance. Television or multimedia, for example, use all three coding systems to transmit your message. Salomon (1979) notes that it is a system of symbols that is embodied by the environment, and not other characteristics that may be directly related to cognition and learning. "And the code can activate a skill, short-circuit it, or explicitly supplant it." [10]

V. CONCLUSION

In conclusion, this paper can be really related to the importance and development of multimedia programs in order

to improve quality and efficiency of distance learning. Also, it can be concluded on "there is need to introduce quality distance education programs. It can be done through accepting and using quality in the assessment and requirement of distance education programs, supporting students with good, helping services, training faculty members in new technics, approaches and methods of instruction in the distance education, supplying technical support for illustration of research culture, accepting different styles of assessment of distance students, enhancing code of ethics for distance education faculty members and students, provision of the high standard in infrastructure and technology, starting courses of distance education only through approval of national accreditation council for distance education (NACDE) and taking measures of check at every delivery system of distance education courses through quality control agencies."

Constant creations and enhancement in all areas of information technology open up new horizons. channels and opportunities for improving teaching and education methods. Secondly, they can enhance the capability of teachers to show information in the formation of interaction and media. This kind of plans can be related to traditional methods. It may support students or learners by offering them information in channels and methods that can be much more understandable easily, processed, and extracted. Also, challenging and using these alternative teaching methods can be especially helpful and fruitful for children, people with special needs or students in rural areas, where they can virtual or remote teachers, basically for those specialties that can be in short supply.

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