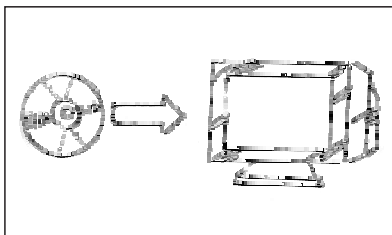# Delivery of Multimedia

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T he delivery of the learning content is very important, especially when it is for self-learning. We need to consider the ways through which multimedia can be deployed effectively in a particular teaching-learning environment for effective self-learning. In order to decide the most useful delivery option, we need to take some systematic steps, and also have to understand the unique features of each of the options available to us.

In this section, we will discuss all about the multimedia delivery options available to us, and how we could decide about the options that suit our requirements.

Objectives

At the end of the section, you will be able to

- Identify various options of delivering multimedia to learners; and
- Decide the use of the best possible options available to a specific target group.

Delivery Options for Multimedia

Multimedia lessons can be delivered in multiple ways, including through stand-alone CD-ROM. With the fast development of Internet and its bandwidth, it is also possible to place multimedia lessons on the World Wide Web as a part of an e-Learning programme. Another option still available and used most effectively is as supplement or complement to the printed lessons. Thus we have two basic approaches to deliver multimedia lessons -- independent approach and Blended-approach. Independent approach has two different modes -- web delivery and CD-delivery. The blended approach has two strategies -- Supplementary and Complementary. Let us see each of these delivery options available to us.

CD-Based delivery of Content

The CD-ROM drive has become a standard component of computers these days, and therefore it is one of the best options available. Moreover, the sizes of multimedia lessons are normally big, and the high-density storage capacity of the CD suits the technical requirements. How much a normal CD can hold is given the box.

Web-Based Delivery of Content

Since multimedia files are normally very big in size, they are not recommended for web-based delivery because of the poor bandwidth at the user's end. However, with the emergence of Shockwave, the delivery of multimedia on the web has become

Text	650,000 Pages
Audio	Five hours of FM-stereo quality sound or 22 hours of near AM quality mono or 44 hours near AM
Stills Pictures	5,000 very high resolution or 10000 high resolution or 40,000 medium resolution
Motion Video	72 minutes of full screen, full motion resolution at 30 frames per second
Mix and Match Example	20 minutes of full motion video with 5,000 high resolution stills with six hours of audio with 15,000 pages of text
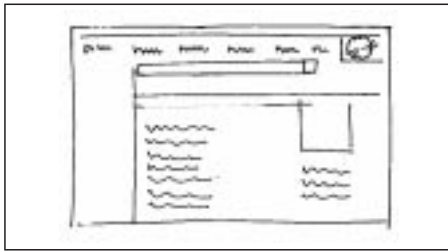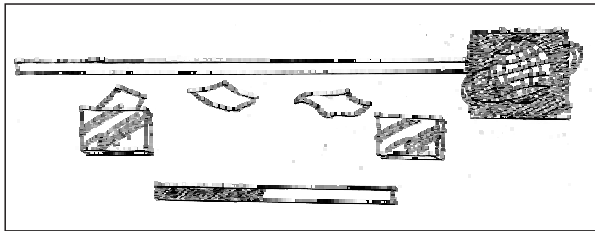
easier. Still you can't expect a multimedia to be downloaded as quickly as it runs from a CD. Shockwave is a standard format for displaying media element. It is also an extension or plug-in for the browser. Essentially, it is a compression technique that allows you to play Director, Flash or Authorware files over the net. However, if you plan to deliver multimedia over the net, you need to do the following:

- Minimize the number of cast members

- Use low- resolution images and sound

- Use images that can be compressed

- Do not use loops continuously.

Blended Delivery Strategy

A blended strategy means that you can mix different delivery media in to a package. For example a self-learning programme can be delivered in a package of content in print, multimedia CD and the Web versions. In a supplementary strategy, the multimedia CD or Web version becomes supplement to the print version of learning materials. This strategy is useful, if there is a need to strengthen the learning process by providing multiple points of view. On the other hand, a complementary strategy defines the limits of print medium to some areas of the content and the others for multimedia delivery. In this way both the media approaches become complementary to each other, forming an integrated approach.

Analyzing the Delivery Media

The factors that determine how you want to deliver your multimedia package are related to the reach, and to the inherent characteristics of each medium. The choice of using multimedia for delivery of a lesson is an important decision that needs to be taken very carefully at the beginning. Once it is decided that a particular content area is good for delivery through multimedia, it is important to consider how to reach the target learner. At this stage we need to consider the learner's access to the Internet and computing facilities. In most of the developing countries, where the cost of Internet access is still on the higher side, the CD-based delivery of multimedia would be the better option.

In the next section we will discuss how we can evaluate multimedia lessons, and various approaches to evaluation.