UNIT 6   SELECTION OF METHODS AND MEDIA

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6.0   INTRODUCTION

In Unit 5 we have discussed the different media and technology that can be used for distance education. We also looked at their merits and demerits. But, it is all the more important to know as to how to select and integrate these media for the successful practice of distance education in a given situation. In this unit we will discuss the multimedia approach followed in distance education, the need and the criteria of media selection, steps to be followed in selecting or deciding upon the choice of appropriate media and the ways and means of integrating different media to achieve course objectives.

You have been watching/listening to educational TV/Radio broadcast. We advise you to critically watch/ listen to these programmes and examine the rationale for choosing that particular medium. In the light of the criteria of media selection presented in this unit discuss your observations with your academic counsellors(s) and peer group during the face-to-face contact. A comparison of your own observations with what we have presented in this unit will help you develop a better understanding of the selection of media in the context of distance education.

6.1   OBJECTIVES

After going through this unit, you should be able to:

●   explain the different criteria of media selection and media integration;

●   select and integrate appropriate media to achieve specific teaching-learning objectives; and

●   argue the case for multimedia approach in distance teaching-learning.

6.2   MULTIPLE MEDIA APPROACH

As you have noticed in Unit 5, a variety of means of communication (media) are available to teach students of distance education. Use of more than one medium is known as the multiple media or multimedia approach.

The expression 'multimedia' is preferred to multiple media and it has also become popular in the computer world. The word multimedia has acquired diverse meanings. For some computer specialists multimedia means a package which combines computer-generated

text and graphics on the same screen, and adds even sound effects to it. Multimedia systems describe the hardware and software necessary to combine pictures (still and moving), photographic images, computer graphics, animations with sound, text, computer generated data, etc. This helps a lot in preparing and developing different kinds of programmes. All the information in a multimedia programme — sound, pictures, text, data and animation — can be recorded on a single object (typically, an optical disc). In other words, images and sounds of all kinds can be put in a single information environment. The expression 'multiple media' is, thus, used to describe the integration of various means of communication, such as printed text, audio broadcasts, video broadcasts, audio tapes, video tapes, computer, face-to face contact and so on.

Various media are used in distance education to achieve course objectives effectively and efficiently. This is known as the multiple media or multimedia approach in distance education. The rationale of using multiple media approach in distance education is to exploit the potential of each of the media. As you have observed in Unit 5, every medium has its strengths and limitations. All the media are not suited to all kinds of content or objectives or clientele. Teaching through multiple media is certainly more effective than that of single medium. For example, a television programme supported by a description through print will help students learn better. The media are combined in such a way that they supplement or complement each (one) other (another) and work as a unified force of teaching to help students achieve course objectives. The multiple media approach caters to more than one sense, senses of seeing and hearing. Moreover, some students learn more from specific media.

The theory of learning and communication also support the multiple or multimedia approach. The students learn better if the information comes from more than one source, particularly if they have the opportunity to share and discuss the information with other people (Jenkins & Koul, 1993). According to Jenkins and Koul (1993), multiple teaching offers students various ways of learning, and this variety entails certain advantages e.g. if a student misses an audio broadcast, he can study printed text. Also, the multiple media approach enables the students to learn according to their choice. A wide range of media are now available for teaching-learning at a distance. In the following sections we discuss how to select and integrate appropriate media to achieve different types of objectives.

Check Your Progress

Notes: a) Write your answers in the space given below.

b) Compare your answers with those given at the end of the unit.

1. What do you understand by multiple media or multimedia approach in distance education?

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6.3 MEDIA SELECTION

Education media help in delivering information/content from the source (say the teacher) to the receiver (say the students) and vice-versa. In other words, an educational medium

is a means of educational transaction. A medium is a physical entity through which communication takes place. There are various means of communication available to teacher from which he has to choose.

6.3.1 Need

There are different categories of media – print, non-print and face-to-face. Some media are simple while others are complex to design, produce and use for educational purposes. No medium is perfect to achieve all types of objectives; no medium is inferior or superior to others. Each medium has certain obvious strengths and limitations. We have to select a particular medium or a combination of media based on the needs and requirements of both the students and the courses being taught or learnt. It, therefore, becomes essential to select the most appropriate medium or a set of media to facilitate students to learn and achieve the course objectives effectively and efficiently. Some media are suitable to achieve certain objectives. To achieve the course objectives we need to take intelligent decisions while choosing appropriate media. Two points are to be noted here:

i) The process of media selection is an important part of course design and course development. Media selection is based on the capabilities of a medium.

ii) An educational medium should be selected only if it is capable of presenting the intended information to students and should enable them to actively participate in the learning process.

We should be cautious here. Our focus should not be on the media/technology as such, rather we should be concerned about the learning opportunities the media can create for learners. We should treat the media as a pool of tools from where we can pick up the most appropriate one to solve our problems or achieve our objectives. We, therefore, need to understand the ways in which media can be chosen for our courses.

6.3.2 Bases/Criteria

There is wide range of the media available for education. So, there is a pressing need for practical guidelines on media selection and use. Theorists and media scholars have made many attempts to develop models and theories on media selection. They have concentrated on the various attributes of media. But there is no one single theory equally applicable to the selection of media vis-à-vis all the contexts of teaching-learning situations. Some generalizations about the media selection, however, are possible. These generalizations, however, are not universal. For example, we cannot make a statement such as this: "Always use TV for teaching art" or "radio is not good for mathematics". The research that has been done in this area is, in fact, inconclusive. Most of it suggests that any medium can be used effectively for any subject, if the students are highly motivated and the circumstances favourable (Todds, 1986). Media experts have enumerated various factors that every distance teacher should keep in mind while selecting media for teaching. We first present here the bases recommended by some eminent media experts and then discuss, in detail, the general factors which influence media selection.

DeCecco and Crawford (1977) have suggested *three bases* for the selection and use of the media. They deal with:

● availability of media;

● an analysis and design of instructional system i.e. how to develop a course of instruction with full utilization of a wide range of media; and

● knowledge of research findings on the effectiveness of the media.

DeCecco and Crownford, tried to generalise the bases of taking decision about selection of appropriate media for the teaching-learning process.

Romiszowski (1988) suggested the following seven factors for the right selection and use of instructional media in distance education:

● Types of learning tasks (i.e. objectives to be achieved)

● Characteristics of learners

● Features of knowledge, attitudes and skills to be acquired by the learners.

- Features of place of learning (light, space, etc.)
- Practical design constraints (production resources, money, time available, etc.)
- Target population (size, location, etc.), and
- Subject matter and required student performance.

Rowntree (1982) has suggested five factors for critical selection of instructional media

They are:

- Content
- Sequence
- Strategy
- Stimulus mode, and
- Medium

More or less similar criteria have been suggested by Bates (1987). His criteria are as follows:

- Instructional tasks of media in terms of learning objectives, learning outcomes, learning activities/content, and learning strategies
- Access to instructional materials/media
- Control on media for optimum learning
- Costs involved in designing, producing, delivering, maintaining and utilizing media
- Organization and management of media.

If you analyse the bases for media selection presented above, you will find that these can be categorized into *three main groups*. They are:

- Institutional bases (infrastructure, financial position, human resource, courseware, etc.)
- Student bases (learning objectives, learning environment, readiness/motivation level, personality, etc.) and
- Technology bases (availability, accessibility, compatibility, complexity, effectiveness, etc.)

By now you might have realised that media selection is not a haphazard way of selecting or rejecting a particular medium or a set of media. Media selection is an integral part of the systematic process of designing learning materials. In other words, it is part of the instructional design in which methods and media are identified to effectively transact curriculum to the students pursuing their study through distance mode. The ultimate objective is that the media selected should increase the productivity in terms of learning outcomes. There is no single criterion on the basis of which we take the final decision on appropriate media. We have to consider various factors related to the target-group, nature of content, costs involved, and the media. Let us look at few more important criteria of media selection for distance education. They are as follows:

- Pedagogic effectiveness
- Availability and accessibility
- Cost effectiveness
- User friendliness
- Trained human power, and
- Hardware

Let us discuss each of these criteria with the help of suitable examples.

a) Pedagogic Effectiveness

Media differ in their teaching functions. The guiding principle is that the unique potential of each medium must be exploited for the attainment of the specified learning objectives. You may recall the three domains of educational objectives – cognitive, affective and psychomotor – discussed in core courses. You need to plan different teaching-learning strategies by choosing particular media and methods to achieve objectives of these three domains. For example, if the objective pertains to the affective domain (related to attitudes, interests etc.) visual media with complementary activities in other media may be the most suitable strategy. An effective way to achieve objectives in the affective domain is through providing a 'human touch', perhaps with a TV programme. But, if the objective is to transmit information (cognitive), print material are perhaps, more effective. To develop or sharpen skills, personal contact and TV programmes with supporting activities (such as working on an experiment or writing on the blackboard) are required. For practical work, experimental kits can be very useful. Video includes pictures and symbols in either a still or motion format. Pictures can show exactly what an object looks like at any given moment. In many learning situations visual dimension is essential to comprehension. For example, in chemistry, a visible change occurs in a substance when heat is applied. These illustrations are explained better through visual media. You can think of more examples of pedagogic effectiveness of each individual media.

Another pedagogic factor is that the media should provide for the student control over his/her learning. In distance education the students pursue their study independently. So the media should provide the students with the flexibility in terms of pace and time of their learning. The media should allow the students to learn according to their need and the opportunity as and when they want to study. Some students are fast learners while others are slow. Some students go for in-depth study while others stop with the surface level. The media selected should cater to individual differences and provide autonomy to each student to learn according to his/her capacity. TV and radio broadcasts are more rigid while video and audio cassettes are more flexible. The students can use print, audio and video cassettes as and when they need them. To use these three media, we have to depend on battery/electricity to replay audio and video cassettes while printed text does not require such additional support. But, then access to a walkman, enables you to use audio cassettes even while travelling in a bus/train, going for morning walk or relaxing in a park, etc. The cassette technology (for that matter printed text also) allows the students to be selective in their study. They can skip, skim, reverse back or fast forward depending on their needs and requirements. However, to achieve the mastery level, the pace of learning will be slow. The student has to study the learning points carefully and critically. Radio and TV broadcasts do not give such freedom to the users.

b) Availability and Accessibility

The media selected must be available locally, that is, within the country concerned, and there should be adequately trained human power to manage and use the media available and accessible. At the same time, the target group must be able to have easy access to it. For instance, there are some popular media such as text-books radio, and TV which are available in India and a substantial number of students have access to these media. On the other hand there are less accessible media such as computer, e-mail, fax, internet, CD, etc. and their accessibility to students is limited, though they are accessible to teachers. By availability, we mean that the technology exists within the reach of the target group. For example, in some parts of our country radio and TV signals are not available; telephone line is not available. On an average, only two out of one thousand persons in the country have a telephone connection. It is expected that by 2002, four out of one thousand persons in the country would have a telephone connection. Further more telephone network is an urban phenomenon. There are some areas where telephone infrastructure does not exist even today. If technology is available, then, the question of accessibility arises; whether the target group we intend to cover has easy access to the technology. If students cannot have access to the technology at home or at work place, they can be directed to facilities at a learning/resource centre. This centre plays an important role in a developing country like India where necessary technology infrastructure is lacking or inadequate. This has become more important for secondary school education as most of schools are technologically poor and are not even linked telephonically. If availability and accessibility of technology can be ensured, selection of media becomes relatively easy.

c) Cost-effective

Financial constraints are a concern of every country, rich or poor. Financial criteria need to be kept in mind while selecting a medium for distance education and training. If the same objectives(s) can be achieved by using a simpler and cheaper medium the choice would naturally be for such a medium only. Further, we need to look into the relationship between the cost and the benefits in terms of learning outcomes. While doing so all type of casts should be thoroughly considered. Here, let us discuss in brief, a few types of costs involved in the choice and use of educational media.

Capital Cost: This cost is involved in creating technological infrastructure, such as audio and video studios, satellite link ups, (up-link and down-link facilities) transmitters, etc. It includes land costs, costs of construction of buildings, equipment, etc. Technologies such as television and computers require high initial capital expenditure.

Production Cost: This cost is involved in designing, developing and producing learning materials such as self-instructional print materials, audio-visual programmes, computer software, etc.

Delivery Cost: This cost is involved in transmitting information from the source to the receiver and vice-versa. This includes cost of despatch of printed materials, audio and video cassettes, establishing delivery system, broadcast mode (radio and TV), is satellite transponder for transmitting signals, use of compressed digital telephone lines, etc. And, exhaustive listing of items involving delivery of distance education is a difficult task.

Recurrent Cost: This cost is involved in employing, developing and maintaining men, materials, equipment, technology and so on.

We can look at the cost factor from different angles. For instance, the costs mentioned above can also be divided into two broad categories namely *fixed costs* and *variable costs.*

i) **Fixed Cost:** This cost is involved in establishing and running or maintaining technological infrastructure, production of print/audio/video programmes, manufacturing and launching of satellite, construction of studio, etc. The money spent on the production of a video programme is a fixed cost whether it is used by one student or thousands of students. Similarly, once a communication satellite is launched and placed in the geostationary orbit successfully it can be used 24 hours a day, 365 days a year. It does not make any difference if the satellite-based communication is used by one or unlimited users. The staff will have to be paid the same salary, whether they produce a small or a large quantity of learning materials as part of their regular duty.

ii) **Variable Cost:** This cost is liked with certain variables. Variable costs for production and delivery differ considerably depending upon the type of technology used. The change in variables causes variation in the cost. For example, use of more sophisticated technology will cost more. The cost of distribution is a variable cost i.e. it will depend on the number of copies to be despatched, the number of students, the number of study/learning centres and so on.

The cost factor is an important but ticklish one. Therefore, the medium selected should be cost-effective and cost efficient. All the institutions involved in distance learning are not necessarily required to create their own infrastructure. In other words, there is a need for collaboration and sharing of resources available. The resources can be pooled and shared, based on proportionate contribution also. By doing so, a lot of duplication can be avoided and investment or resources made available can be optimally utilised.

d) User Friendliness

The media selected should be user friendly, both for the teachers and the students. The media should be easy to operate, use and manage. If the media is too complex to operate and manage, the possibility of its utilisation becomes less. Some media are very demanding in terms of skills to produce and use learning materials. For example, compare the operation of TV, radio with the computer. The applications of computer are many,

and it is difficult for an untrained person to use it, and it demands specific skills/ competency on the part of both the designers and users. However, after sufficient training, we find the computer very useful and user friendly.

e) Trained Human Power

There is no substitute for professionalism. Every medium demands certain competency on the part of the users, may be teachers or the students. You might agree that the developing countries including India borrow many a technology from the developed countries. The technology continues to be in operation till the foreign support (both financial and human expertise) is assured. Once the support is withdrawn, the borrowed technology gradually becomes defunct or inoperative. You will further agree that the foreign support will not be there for all times to come. If the system has to derive strength from itself, we have to create and make available the trained personnel to design, develop, produce and utilise the technology for educational purposes. If trained personnel are not readily available, they can be developed through training, either within or outside the institution or the country, as may be required. Periodical training programmes can be organised for all those involved in media-based instruction. Or the staff can be deputed to expert institutions for specialised training. So one criterion of media selection is that adequately trained personnel should be available to produce and utilise educational media. This challenge has to be met appropriately by the institutions concerned.

f) Hardware

Needless to say that the technology selected should be safe and durable. It should suit the geographical and climatic conditions of the area/place. Care should be taken that the technology selected in compatible with these conditions. Otherwise, the technology and equipment will become redundant or obsolete. Technology brings with it some problems and risks as well. For example, to operate a TV set you need electricity at both the ends; broadcast station and learner's (user's) end. Even to use a cassette through TV electricity is needed. You should also remember that system failure may prove disastrous for the entire teaching-learning process. For example, failure of INSAT-1B in 1982 disturbed the entire community viewing scheme in the INSAT clusters in India, specially selected for intensive media support for the socio-economic and educational development of the area. Electricity failure or disorder of the TV set may mar the utilisation of educational input. To take care of technological hazards, some alternative arrangements such as a powerful battery or small generator set for operation of a TV or VCR, multimedia for learning, etc., at both the ends should be made beforehand.

In this context, the maintenance cost of the technology discussed above, should adequately include all these costs as well.

Check Your Progress

Notes: a) Space is given below for your answers.

b) Compare your answers with those given at the end of the unit.

2. a) State atleast six criteria of media selection

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b) Suppose a medium is capable of achieving the learning objectives, but is not accessible to distance learners/students' what will you do in such a situation?

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c) If the media available are pedagogically effective and can be made accessible to a large number of students either at home or at their workplace, but is very costly to be afforded by the institution or the students. What will you do in such a situation?

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6.4 MEDIA INTEGRATION

Bates (1992) suggested that the integration of media requires a team-mode approach. He further elaborates that integrated, multiple media teaching materials take a great deal of time to prepare them. In the integrated multiple media approach the role of the teacher changes from some one totally in charge of the teaching materials and the process of teaching, to one who is part of a team.

The past few decades witness developments in communication technologies all over the world. A variety of technologies are now available to deliver educational input from the source to the receiver. More than one technology can be combined to effectively achieve course objectives. We shall now discuss the need and options for media and technology integration.

6.4.1 Need

The integrated media supplements each other's strengths, presents the student with a rich, varied and coherent combination of learning stimuli, and helps students use their strengths in a better way. This is so because some learn better by watching or viewing than reading, some learn better by listening than reading, others learn better by reading than writing. Yet, some learn from peer group interaction.

Todds (1986) argued in favour of using more than one media. His arguments are as follows:

● Some content is difficult to communicate in one medium than another. For example, in some cases, print cannot be effective at all.

● Use of more than one medium can generate, sustain and improve motivation, and stimulate and maintain interest among students.

● A combination of media enhances access to educational input. If we use more than one option, students have better chance of studying.

● Use of more than one medium helps in reinforcing learning. If the same learning point is repeated in different ways, there is a better chance that the student will comprehend it. Moreover different students have different preference or even different abilities or disabilities which make one medium easier to use than another.

● Using multiple media can be economic and effective in the teaching sense rather than financial one. A wise use of a main medium of instruction together with supplementary ones can increase teaching effectiveness considerably.

● Each medium, as you have seen, has its own weaknesses which can be lessened or overcome by using multiple media.

The assumption behind media integration is that a wide range of appropriate experiences is required for students to internalise and fully comprehend learning points. Olson and Bruner (1974), Gagne and Briggs (1974), and Salomon (1979) etc. have made a strong plea for the multiple media approach to effect different levels and kinds of learning. Like in media selection, we need to be careful about combining more than one medium in any teaching-learning situation. Technological developments all over the world have made it possible for people to have more than one source of information: more than one medium to learn. As we have already pointed out, no medium is best for all purposes: every medium has its own potential and weakness. Uniqueness of each medium attracts media planners and media users to exploit its specific uses. This trend-uniqueness of individual medium-gave an insight into combining more than one medium to multiply the potential of individual media. Educators also started using one medium (as the master medium) in conjunction with other media. The first question that might bother us is about media integration. It is a planned combination of more than one medium into a system in which the strength of each medium are clubbed together to achieve certain educational objectives. That is, the multimedia approach is a methodology or a teaching arrangement to overcome the weaknesses of individual media. The media are combined in a way that they operate mutually to help learners realise desired learning objectives and make communication effective and meaningful. Thus, the main purpose of using multimedia approach is to exploit the unique features of each medium as an integrated whole or one. Each medium should contribute uniquely and relevantly to students' learning. Conjucted media should not duplicate each other's teaching functions nor should they counteract each other's effectiveness.

The effectiveness of multimedia approach has been tried out by open universities which found multimedia packages very effective to teach distance students. In general, the print medium is supported by audio-visual media and occasional face-to-face contact sessions.

Effective media combination is a challenge being faced by educational and media planners. Successful integrated media teaching requires a genuine team approach; drawing experts from different professions. The team needs to work with dedication and in a planned way. This is specifically true in case of open universities which offer education at a distance, teach invisible students scattered all over the country and even beyond. For this they are bound to depend upon a combination of various media to reach and teach heterogeneous group of students. It is the resourcefulness of an open university that determines the effectiveness of combination of various media to meet university's objectives. As a B.Ed student you can find this approach in your programme.

6.4.2 Options

The media can be combined in different ways for the purpose of distance education. But all these ways of combining different media can be classified under four broad strategies particularly based on their use. They are:

- Supplementary use

- Complementary use

- Integrated use

- Independent use

Let us discuss each of the above, in brief, with the help of illustrations.

i) **Supplementary Use:** In this type the entire course is delivered through the master medium. In most of the cases it is print media, in many countries, supplemented by other media. The combined media reinforce the teaching function. The topics which require visual explanation, are delivered through television programmes. Supplementary media provide additional channels with additional information/ content for those students who have access to that. Supplementary use of media can be illustrated as shown in Figure 5.1.
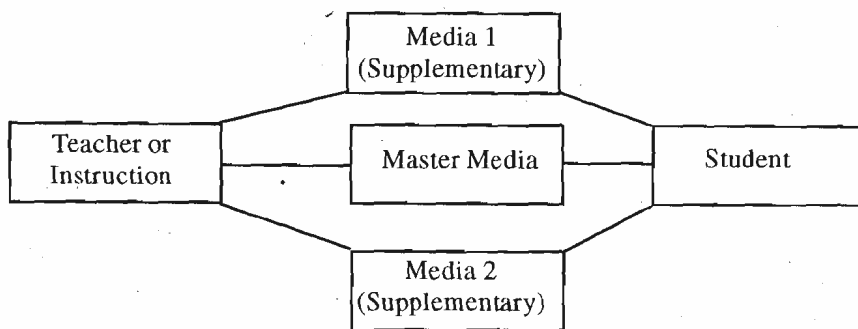
Fig. 6.1: Supplementary use of Media

ii) **Complementary Use:** In the complementary use, the specific strengths of individual media are taken into consideration. The topics to be taught are divided among the media used, so that the potential of each medium is exploited. For examples, if we want to teach science experiments, we may use visual media to show experiment while the theoretical background can be given through either print or audio medium. Thus, a major portion of a course is delivered through the master medium and the rest is delivered through other appropriate media. The combined media perform different teaching functions and mutually help each other in achieving course objectives. The complementary use of media can be illustrated as in Figure 6.2.
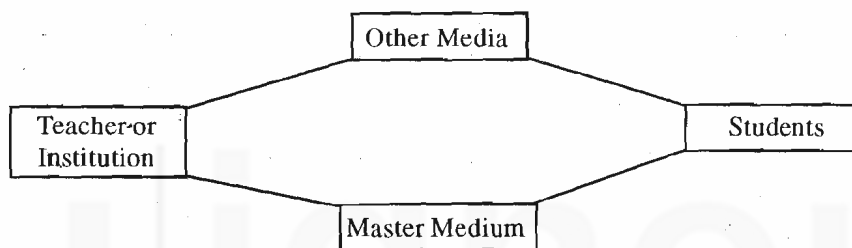

Fig. 6.2: Complementary use of Media

The complementary media is possible when all the students have direct access to all the media being used. In countries like India the students are yet to have direct or indirect access to different media. Even radio may not be available with all the students. Therefore, complementary approach to media is rarely followed.

iii) **Integrated Use:** In the integrated use, the media being used are made part and parcel of the course delivery. The master medium goes with other media as an integral part. To discuss contents relevant to particular topic particular media is used. This strategy can be illustrated as shown in Figure 6.3.
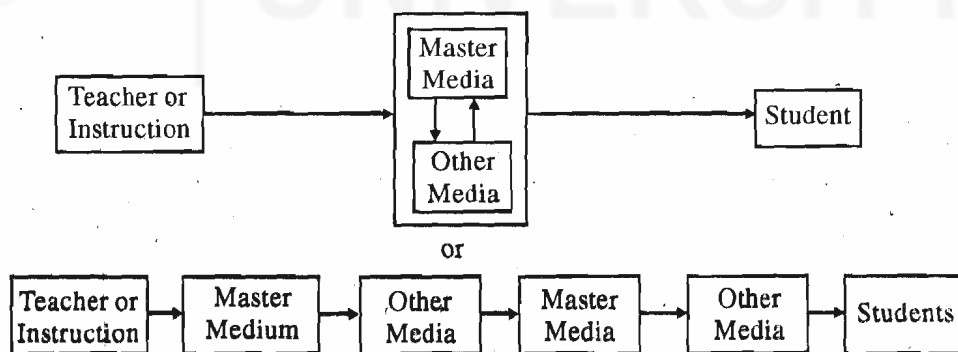

Fig. 6.3: Integrated use of Media

For example, when you are reading a printed text, you may be asked to listen to an audio or watch a video or broadcast to understand a particular concept or idea. This use of media is possible only in case when each student has direct access to the media being integrated. Open universities in the advanced countries can use integrated multimedia packages for their students because of easy access to the media chosen for an educational purpose. In other countries, it is possible to use this strategy in specific courses and that too on a small scale. In case the print

medium is to be integrated with audio cassettes, video cassettes or computers, the audio cassette recorder/player/VCR/VCP or computers should be available with each student. Integrated approach to media is being practised by the UK Open University, for example, but the open universities in many countries, including India do not go for this approach for practical reasons.

iv) **Independent Use:** In the independent use, the master medium carries the entire course to students. The master medium may be print or non-print media. For example, many distance education institutions use the print medium for delivery of entire course content. No other medium is used either to supplement or complement the master medium. The use of independent media can be illustrated as shown in Figure 6.4.
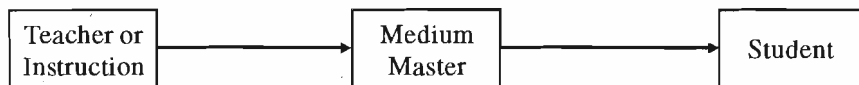
| Teacher or Instruction | → | Medium Master | → | Student |

Figure 6.4: Independent use of Media

The Central RTV University of China and many of the North American Universities use any of the electronic media independently. Now the computer with internet and e-mail facilities has become the only medium of on-line programmes and virtual universities.

Check Your Progress

Notes: a) Space is given below for your answer.

b) Compare your answer with that given at the end of the unit.

3. What are the strategies available for integration of media?

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6.5 LET US SUM UP

In this unit we have discussed several factors to be considered while selecting media/ technologies, multimedia approach, the need for and integration of media for distance education purpose. We have also focussed our discussion on six main criteria — pedagogic effectiveness, availability and accessibility, cost effectiveness, user friendliness, trained human power and hardware — along with other bases/criteria suggested by different experts. These criteria work as guide in deciding the choice of media by an open and distance education institution.

Under media integration we have discussed the need and options for multiple media and media integration. There are various ways/strategies of combining the media which include supplementary, complementary, integrated and/or independent approaches. Selection and combining of media, as you have studied in this unit, are integral parts of course design and delivery in distance education. Depending on the availability, accessibility and other specific conditions of training in a country or institution, the choice is made in favour of one or the other of the approaches we have discussed in this unit.

6.6   ANSWERS TO CHECK YOUR PROGRESS   .

1   'Multiple media approach' and 'multimedia approach' are interchangeably used However, come specialists distinguish between these two terms. For example, computer specialists look at it from the point of view of convergence of different media into one technology i.e. computer. For them 'multimedia is a package that combine computer generated text, graphics, etc. on the screen even adding sound effects. It combines in it both hardware and software. But the term 'multiple media approach' is used to describe the integration of various media such as the text, audio, video, broadcast, face-to-face contact and so on to achieve a specific teaching-learning objective. So, the context in which the terms are used is important.

2.   a)   Six important criteria of media selection are:

  i)   Pedagogic effectiveness

  ii)   Availability and acceptability

  iii)   Cost-effectiveness

  iv)   User friendliness

  v)   Trained human power, and

  vi)   Hardware

  b)   In the given situation there can be more than one alternative. One can create learning resource centres where the students can have access to such media and other learning materials. Or a residential or extended contact programme(s) can be organised making the students' attendance mandatory. The pedagogically effective media can be made available to them during such contact programmes.

  (c)   In the given situation the right way could be to have possible collaboration and cooperation among institutions/organisations. For example, the satellite-based teleconferencing system developed/established by the DECU of Indian Space Research Organisation and IGNOU can be used by a number of users for distance education and training as is being done. The operation cost in such cases can be shared by the users jointly.

3.   There are four strategies available for media integration. They are:

  i)   Supplementary use,

  ii)   Complementary use,

  iii)   Integrated use, and

  iv)   Independent use.

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