UNIT 7 ROLE OF TECHNOLOGY IN TOURISM MARKETING

Structure

7.0 OBJECTIVES

After reading this Unit you should be able to:

- learn about the developing technologies relevant to the tourism industry,
- understand the impact of these technologies on the various elements in the tourism industry,
- appreciate the possibilities of upgrading the services in the industry through the applications of new technologies, and
- know the problems in using new technologies.

7.1 INTRODUCTION

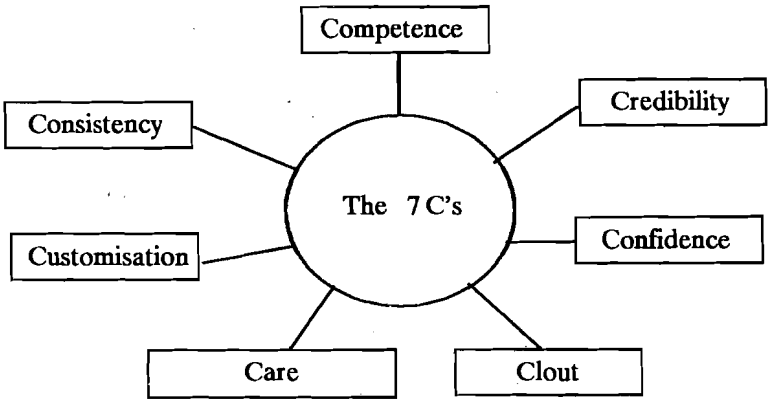
The last decades of the twentieth century are marked by unprecedented developments in the areas of science and technology Advancements in microchips and electronics, in computers and information processing technology, have produced outstanding possibilities in terms of speed and accuracy in operations. Computers have become "user-friendly", making it possible for persons to use them without too much of training. There is no need to learn computer language, as in the past.

Communication between different parts of the world is nowadays almost instantaneous. Written messages, documents and live pictures of events can be transmitted in no time at all, across the world. Millions of pieces of information can be stored in memory or processed within seconds. Networks are being established between information systems within organisations, between organisations and across countries. Through such networks, it has become possible for anyone to access the memories of other organisations, like banks or libraries, for information or even for transactions. Such access is possible without the intermediation of individuals, and therefore on a 24 hour basis.

It is now possible to create images and sounds of any kind and to start and stop operations in predetermined sequences through automatic systems. The films "Jurassic Park" and "Baby's Day Out" are just two examples of the use of high technology to create life like images for great cinematic experience. This is particularly relevant to enhance the attractiveness of tourist products.

New applications are being discovered almost everyday. It is not possible to anticipate what discoveries may happen in the days to come. But all of them will increase expectations of the tourists and make more demands on the tourism industry. The impact will be felt on the systems of hotels and restaurants, transport organisations, travel services, entertainment arrangements and in the creation and maintenance of the attractions at the sites. Both, standardisation and customisation (adjusting to the needs of individuals) will become possible in ways never before conceivable. New opportunities arise to enrich and strengthen

the seven C's of travel services marketing. This Unit takes into account the role technology is playing or can play in tourism marketing.



7.2 IMPLICATIONS OF TECHNOLOGY

Technology refers to the ways of doing things, the know-how and techniques of transforming inputs (or resources) into outputs (or results). When the ways of working change, machines, equipment, layout as well as procedures will have to change. When technology changes, people will have to learn the new ways of doing - that is new skills. Some of their existing skills may become redundant. With new skills and specialisations, communications and decision making processes and the internal systems for information flow, control and coordination, planning or leadership styles will also have to change. For example, with automatic dialing for inter-city and international calls, telephone operators will cause harm and unnecessary cost to callers if they are made to hold on for long periods listening to holding music. In an office, it was noticed that a message received on the Fax machine had not reached the person's (addressee) table for 3 days. The message also had been transmitted on the Fax a few days after it was ready. The new technology enabling speedy communication will deliver speedily, only if there are appropriate methods which move papers speedily from and to the machine. If urgency is not necessary, the Fax technology is irrelevant. In another office, anyone wanting to send a Fax had to first call up the office and request them not to pick up the telephone and say "Hello" when the Fax number was being dialed. Fax machines enable automatic reception even when the receiving office is closed, but the sender in another part of the world is working. This is possible only if the Fax machine remains connected throughout and not used for voice transmissions.

Technology is referred to as high and low. High technology may be understood to mean use of new discoveries that accelerate the operational processes, achieving error free, high speed, precise results. High technology also makes possible activities which cannot be done by normal human capabilities. Electronics, computers, super conductivity, chips and satellites, optic fibres and other materials that are feather weight but stronger than steel, capable of withstanding extremes of temperature and pressures are some of the many advances that make for high technology. This contributes towards making operations both bigger and smaller than ever before. Giant size transportation by air and sea (the jumbo jet will look small by 2010 A.D.), is high technology in action, extending the boundaries of human capability.

High technology demands more utilisation of knowledge at work compared to use of muscle and body. It increases the need for technical skills. It increases the need for coordination among different activities, which must be done in predetermined sequences and ways.

The discretion to do one's own way, practically does not exist. Systems will have to become defect free, as defects will have its impacts at several other places simultaneously. Entries must be made only in allotted slots in prescribed forms, none of which can be modified by anybody without the concurrence of other affected by the job. Interdependence increases, absolute autonomy decreases.

High-tech has big impacts on productivity. Larger volumes, lower costs, quicker processing and high levels of precision become possible. Variations from specifications, however slight

and infrequent can be detected and eliminated. More people are engaged in control, monitoring, research, data analysis, planning, etc. operations, instead of directly in the production process.

It is easy to introduce the latest technology. But for technology to get absorbed and to become part of normal routines, some infrastructural facilities are necessary. For example, scooters, mopeds, motorcycles, etc. have become part of the Indian rural scene, as much as the bullock carts are. This has become possible because facilities like petrol pumps, spare part dealers, service mechanics (for puncture, repairs, servicing) have become available in a very wide scale in remote rural areas. This indeed happened with the large scale use of tractors and pumpsets. The building up of these facilities took years, during which time persons acquired skills, investors with money invested in land, structures and equipment, suppliers set up facilities to supply regularly into these outlets and communication facilities improved. It is like building a new colony or township. Building houses and shops, roads and water\electric connections will not bring people to occupy the houses and shops overnight. Both will build gradually and together. Services like milk supply, newspaper distribution, taxis, buses, etc. will increase as people move and vice versa. After some time, it will be a fully functional colony.

Technology absorptions will not happen through installation of physical facilities and equipments alone. Concerned people will have to learn appropriate habits. If a computer needs dust free atmosphere, with controlled temperature, there is need to restrict entry into the computer room. People used to move about freely in office, going to other people with files, tea, notices, messages or merely to gossip, will have to stop these practices. Not only those working with the computers but others also have to understand and adopt new practices. Until these practices become habits, the absorption will be incomplete.

When new technology is being introduced, it is possible that the people may resist the changes being brought about. Such resistances may happen for a number of reasons, some of which are listed below.

- Discomfort in learning new skills\methods,
- Fear of loss of competence, influence, power, status, future opportunities for growth,
- Fear that some others may supercede or have better advantage because of better capability to acquire new skills or better familiarity with new technology,
- Loss of control on work, and
- Disturbance of social groupings and relationships.

Check Your Progress-1

1) What do you understand by 'Technology'?

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2) Is there any role of human factor in the adoption of new technology?

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7.3 RESERVATIONS

In the tourism industry one of the major applications of technology is in the area of reservations. Manual systems find it difficult to cope because of large numbers and long lead times. Tourist groups planning to visit several places in one or more countries some time in the future have to make reservations on airlines, railways, cars, buses, hotels including arranging for pick up and dropping. Reservations are made days or months in advance and will have to be executed without fail and therefore come to notice on due time to ensure performances. With varieties of groups at different times and with different requirements, manual systems are likely to fail. A failure not only inconveniences many, but may mean spoiling the entire purpose of the trip. Several developments have taken place to make these services more reliable and satisfactory.

In the Indian Railways, it has become possible for a person in Town A to make a reservation for travel from Town B to Town C. Air bookings can also similarly be done. In some places, the travel agent can access the airlines mainframe and make a booking directly. Airlines and hotels can, on their own, make reservations on each other's facilities directly world-wide, almost simultaneously. Several of these systems are owned by airlines like **SABRE** by American Airlines, **APPOLO** by United, **WORLDLSPAN** by Delta, **AMADEUS** by a combine of Air France, Lufthansa and the Scandinavian Airways, **GALILEO** by British Airways and Alitalia together. Some airlines make more money through their Centralised Reservation Systems than through air transportation. Motels and car rentals are also linked to these reservation systems. The computers would automatically generate outputs of actions to be taken, make lists of passengers to be accommodated in each compartment in trains, schedules of arrivals and departures in hotels, vacancies in hotel rooms or airline seats, persons to be met, cars to be arranged and so on.

Some years ago, one could choose a seat on an aircraft only at the point where the aircraft was originating. At other stations, one had mostly to occupy the free seats after boarding. On some international flights, the check-in counter may have a message from the aircraft flying in, intimating the seats that would be empty on landing and one could make a choice therefrom. Nowadays some airlines, allow choices of seats even at the time of booking, from any station because information about bookings done and availability, can easily be known at every point through terminals connected to the central computers on real - time basis.

Reservations are not only for places and equipment, but also for food. Those who need special food, for religious, medical or other personal reasons, will find their pleasures thoroughly destroyed if these do not become available. Families are known to have starved on long flights, because the airline did not provide the special diet as requested and promised. It is not easy to take note of and provide for such individual demands when arranging for groups. Latest technology makes it possible for such non-standardised, non-routine exceptions to operations, like in an assembly line of car production, it is possible to incorporate individual choices about colour, fender design, seats and upholstery, makes of tyres, brands of stereo system, and so on.

It is also possible for managers and waiters to know preferences of repeat patrons in restaurants (for tables, spiciness of food, wines) or theatres and cinemas (seats and kinds of plays). Patrons can be informed and tentative reservations held, when performances of their preferences are scheduled. Similarly tour operators can inform their patrons if the forthcoming schedules are known to match the desires of their customers. Information technology makes it possible to hold such data and bring it up automatically for action

Reservation networks need not only be across nations or cities. Tourists sometimes reach cities without confirm reservations and are lost without proper information on availability of suitable accommodation. Kiosks at airports, railway stations, bus terminals or other central points linked to hotels of some standing, can provide a very important service of not only giving information but making a booking. Hotels that may not want to reveal details of their patrons, can still conceal details of their guests and provide information on the network only on availability and occupancy of rooms. With user friendly equipment, it would not be necessary to man these kiosks, provided travellers are made familiar with usage through clear visual instructions.

7.4 INFORMATION

Tourists need information while planning a tour and also after arrival at any centre. Information may relate to distances, climate, travel and accommodation facilities, places to see, things to buy and so on. Traditionally, such information is available in printed brochures prepared for promotion. They are rarely upto date. Additional information would depend on the knowledge of the personnel meeting tourists and therefore very often incomplete and unreliable. Use of computer memories can provide complete and reliable information corrected, upto date, on every question, however uncommon the question may be.

Technology exists whereby the information stored can be in the form of pictures with even perceptions of depth. The best example of this is the CD-ROM. Here enquiries can be answered not merely by display of words but also by pictures. Besides it provides a variety of information ranging from hotels to arts, crafts and culture. Printed brochures may carry only some views of some slights, while computer memories can be more complete. Continuous updating is also possible. If proper networks exist, the updating made by the concerned authority, (on matters like hours of visit, charges, additions, closures, etc.) will automatically be available at every terminal. There would be no need for such authorities to send separate communications to all the information offices. They thus avoid errors of communication not having been received or noticed.

More and more travel agencies, tour operators and tourism departments are making use of CD-ROMs, video films, etc. for promotional purposes. In the tourist generating markets the prospective buyers are shown the type of attractions and facilities available at the destination along with a demonstration of the experiences they have in store.

Check Your Progress-2

1) Write about the merits of technology for reservation purpose in tourism industry.

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2) How application of technology can facilitate better information?

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7.5 THE EXPERIENCE

The possibilities of using technology to enhance the experience of the tourism product, are immense. For example, some tourists may not be able to visit all the sights, because of shortage of time, physical weakness or other reasons. For example, the caves at Ajanta are usually visited and seen from the caves level. But there is an entirely different comprehensive view from up above and from where, a walking down to the caves is an exhilarating experience. This is however strenuous, needs personal transport to reach this point, which (the transport) must then move separately to the main gate. The authorities also do not encourage movement along this route as there are risks of accident to persons as well as damage to environment. It is possible through the use of electronics to provide everybody with this experience without the physical strains or individual and environmental risks. It may then be possible to permit those who may still want to walk down these slopes. The numbers may remain small or can be restricted through high fees.

Guides are not always pleasant to listen to or good at explaining the history and mythology. They usually talk to groups, not all of whom are near enough to hear properly. Language and accents also, interfere with proper understanding. The commentaries on exhibits in the

museums can be taped and given to individuals with earphones, at a charge to be collected back at exit. This allows each individual to adopt his or her pace depending on the personal interests. Another method adopted is to be supplement the tour later, perhaps in an exhibition lounge, through exhibits, with separate commentary on audio or video tape, for those who might be interested. Similarly, separate monitors can be made available where one can call up any exhibit and watch or listen to explanations in the preferred language.

One of the attractions near Ahmedabad is the Swaminarayan Campus. The exhibits depic. the life of the saint. After a brief introduction through slides and sounds, the visitors are taken along a route into spaces, which in sequence depict important stages in his life. His travels through rain forests is shown through a dark area which has lots of trees and bushes and rivulets and water falling and sounds of animals, birds, rain, wind, etc. The total effect is as if one is in a rain forest. This is made possible through synchronised light and sounds electronically generated and electronically regulated. Any situation and atmosphere can be simulated making for very realistic experiences, more intense and more complete than the Son-et-Lumiere (Light and Sound) shows in Red Fort, Teen Murthi in Delhi, Golconda Fort in Hyderabad and other places.

A more intense and complete experience is made possible when visual projections are made. If one is at the centre of an enclosed space like hemispherical dome and coordinated moving pictures are projected all round, one does get the experience of really moving. Sensations of speed, sudden climbs, depressions etc. become real. Through additions of light and sound, one can be given the experience of going along roller coasters, or amidst wild animals or through turbulent seas. Computer animation of the kind used in the film Jurassic Park is a further possible addition to enrich the experience of travelling through preferred routes while, infact, sitting immobile. One can sit in a room and have the experience of a canoe ride from Gangotri to the Bay of Bengal. One may be cruising along in a boat on shark infested waters and a shark comes in at high speed, jaws fully open and suddenly snaps at the boat to the sounds of crumbling timber and rifle shots from the stern of the boat. Visitors are known to scream in fright and at times even pass out during these extremely realistic simulated experiences. Appropriate warnings have to be issued so that people with weak hearts, for example, do not venture into such experiences.

Experiences in parks can be made more pleasant with lights and water flows made to modulate according to set rhythms of music. One can cite here the Vrindavan gardens near Mysore or the dancing fountains at Paithan. Working models of sights can add to the attractiveness. One might create at popular tourist spots like Agra or Khajuraho, cultural or theme parks, containing perfect models (may be diminished sizes) of the attractions at other centres in India with authentic settings, colours, elevations, etc. The Taj Mahal for example, could be shown in different conditions of light including a full moon night. This could have a promotional effect, creating desires to visit the real things. This may also be satisfying for those who may not be able to make a visit. The curiosity of the historical and\or cultural tourists, could be met to some extent by the use of such technology.

Japan has created indoor beaches in which the sun beats down, there is real water and waves and tides. They have also created indoors, a snow bound mountain slopes in which people can ski or toboggan under severe cold and sometimes breezy conditions. Technically it is possible to recreate forest hikes, caves, etc. for the adventure or sports oriented tourists.

Thus technology can enhance the value of the product for tourists whether they be:

- ethnic tourists - having concern for the unique, often exotic customs of indigenous people,
- cultural tourists - whose interest is for local colour, festivals, costumes,
- historical or heritage tourists - whose interest is for buildings, architecture, museums, locales of historic events,
- environmental tourists (eco tourists) - who want to be with nature, watching or walking or living in it,
- recreational tourists - who seek sports and physical activities,
- adventure tourists - seeking sports that challenge the human systems with higher levels of uncertainty and risks.

While these possibilities exist, it may take some time before they can become operational in India. The main reason is that we do not yet have the necessary infrastructure. It is essential to have a steady and reliable source of power. The maintenance of the equipments will have to be strictly according to prescribed routines. Restrictions regarding load, temperature, humidity, time schedules, etc., will have to be rigidly regulated. Most of all, persons associated with these systems will have to be trained to perform to a script without any scope for deviation. These will develop as we get used to the requirements of the computer age. They cannot be and should not be rushed

7.6 COMMUNICATION

Technology makes communication almost instantaneous. Documents transmitted through FAX, information through radio links and satellite computer links can reach specific points in remote areas. Very small towns have FAX, STD and International Telephone Direct Dialing facilities, which can be hired at very reasonable costs.

Contents in floppies can also be transmitted electronically. The E-Mail is another development that promises to dominate office routines very soon. Business documents are transmitted as Electronic data. Many executives who travel continuously for many days keep in touch with their offices by the simple mechanism of connecting their lap top portable computers to their offices through the telephone in their hotel room, using modems. They can receive all the messages and mail waiting for them and issue instructions to be seen by their secretaries and acted upon, when they come to office. With the increase in business traveller traffic, hotels will not be popular unless the rooms provide the facilities for such linkages through modems.

Voice mail can also be received and responded to just as written mail can be received and responded to. The Voice Mail Box digitises voice and stores it in a magnetic disc for later retrieval by the receiver on request.

PBX and PABX systems (telephone exchange within offices) can be made to automatically ask questions (whom they want to speak to) and respond to instructions from the callers. Telephones (voice), computers (electronic), fax (fascimile reproduction and transmission) can all be made an integrated network.

Teletexts are common in Delhi in India, providing information relating to railway schedules, airline schedules, weather news and stock market movements. This is technology which can be used for reservations.

Notice boards and signboards, need not be static pieces of furniture on which the material is updated according to availability of the typist or the painter or the attendant who is to stick the notice. Electronic bulletin boards make it possible to have messages get ready, at one point to be simultaneously displayed at several select points even over long distances. A notice put up at the Head Office can simultaneously be displayed at all the other offices. Electronic boards are more attractive (they can be made to flash) easier to read (big size letters), colourful and can be varied frequently (enabling multiple messages as well as updating). They also remain clean for longer periods.

Many hotels handle groups of tourists who may be moving out during the days. If there are several such groups, wanting packed food and drinks to be carried, and are leaving the hotel at different times, the information about and adherence to menu, quantities and timings, becomes very critical to the quality of the service. Manual systems with chits ticked on the board before the supervisor, are not foolproof. Errors may be traced to illegible handwritings, overpinning (one above the other) or gusts of wind that may carry the chits away from the boards.

The railways in India are planning to introduce telephone services on some main line trains. Many airlines already offer these services to their passengers. The railway's objective is not only to provide a valuable service to passengers, but also to be able to get in touch quickly with control stations in the case of breakdowns.

Tourists in forests or on mountains and rivers (both environmental and adventure tourists) can benefit immensely from the technological advances. With the use of mobile phones it would become easier to direct tourists to rare species like tigers and lions, which are difficult

to spot in forests. Innumerable tourists now return disappointed at being unable to watch these animals despite several days of elephant and jeep rides. Hence, the use of technology can add value to the tourism product and provide better services.

Check Your Progress-3

1) How can technology help the tourists who are interested in historical monuments?

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2) In what ways E-Mail and voice mail contribute to the tourism industry?

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7.7 LET US SUM UP

Tremendous advancements are taking place in technology, ensuring very high speeds and accuracy in information processing. This will make it possible to offer much better services in hotels and restaurants, more reliable and complete information about sites and attractions, and improve communications. There are immense possibilities of using simulations and robotics, generation of sounds and lights, the control and coordination of movements of life - like models. These can enhance the experience of tourist attractions, at sites and even provide the experience at some distances. Technologies are still developing. Use of new technologies requires not only the installations of equipment, but calls for changes in systems as well as in the skills and habits of personnel. Without proper absorption, the new technology will not deliver to its maximum capabilities.

7.8 KEYWORDS

Customisation : adjusting to the specific needs of individuals

Modem : an equipment that enables inter connection of computers at different places, through normal telephone lines.

Network : the interconnection of different systems by which they can access and interact with each other.

Technology : the ways of doing things.

User friendly : computers responding to user's language, avoiding need for special computer language.

7.9 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress-1

1) See Sec. 7.2.

2) Read Sec. 7.2 and then based on your experience you have to explain the need for training, development of appropriate skill and positive attitude for acceptance of new technology.

Check Your Progress-2

1) See Sec. 7.3.

2) See Sec. 7.4.

Check Your Progress-3

1) See Sec. 7.5.

2) See Sec 7.6.

SOME USEFUL BOOKS FOR THIS BLOCK

Copper, Fletcher, Albert and Wanhill	:	**Tourism Principles and Practice**, London, 1993.
Khan, Olsen Var (ed.)	:	**VNR's Encyclopedia of Hospitality and Tourism**, New York, 1993.
Philip Kotler	:	**Marketing for Non-Profit Organisations**, New Jersey, 1982.
Philip Kotler	:	**Market Management: Analysis Planning and Control**, London, 1984.
Rogers and Slinn	:	**Tourism: Management and Facilities**, London, 1984.
Victor T.C. Middleton	:	**Marketing in Travel and Tourism**, Oxford, 1993.

ACTIVITIES FOR THIS BLOCK

Note: Discuss the activities with your Counsellor at Study Centre.

Activity 1

Prepare a questionnaire to conduct a market survey for any tourism product.

Activity 2

For the promotion of a product you have to do market research. How you will plan your survey?

Activity 3

In the light of various options discussed in the Unit to face competitors you give your own suggestions.

Activity 4

Make a list of various factors that may influence the inflow of tourists.

Activity 5

Identify some key areas in tourism industry where application of computer technology is very essential.