Kurgu Dergisi
S: 11, 257-279, 1992

AN EVALUATION OF THE IMPACT OF INTERACTIVE VIDEO SYSTEMS IN EDUCATION AND A MODEL FOR TURKISH DISTANCE EDUCATION SYSTEM - II

Domesday Project, The Future and a Model

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SECTION FIVE

The Domesday Project

The Domesday Project offers a glimpse of what interactive video can achieve. It shows that information can be stored in exciting and useful new ways that will interest a general public as well as educational users. Furthermore, it demonstrates what can happen when government, industry, powerful agencies like the BBC and schools, all combine their energies in the realisation of a single project.

It seems reasonable to assume that the spur to initiate the Domesday Project was the desire to create a platform from which the commercial potential of videodisc could be judged. Beyond this the project could be given a rationale in terms of a desire to mark the 900th anniversary of the first Domesday Book. Instead of the handwritten manuscript, state-of-the-art technology would be used,

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thereby offering a fundamental comment on how British society has evolved. Thus, there is a genuine elegance to the endeavour, because in a self-aware manner the Project became part of the exploration of the claim that interactive video would 'do for television programmes what print did for the illuminated manuscript' (Holt, 1988, supp iv). The Domesday Project is evidence of a communications revolution, offered on the eve of the revolution itself.

Philips contributed £500,000 to the project which utilised the Philips Laservision videodisc player. The Department of Trade and Industry matched this sum in an effort to encourage interactive video related activity in Britain. The BBC was able to offer its pictorial and televisual reserves, as well as capitalising on its close links with Acorn computers. The BBC Micro is already a well established computer in schools and colleges, so it was sensible to base the development on this machine.

The project's chosen task was to offer on videodisc a complete picture of Britain. The Domesday Project is 'a unique picture of the United Kingdom in the eighties, an electronic exhibition of Britain and the British' (Alasdair Milne in Macdonald, 1986, p.14). The full encyclopaedic capabilities of disc technology were to utilised to this end. The result, on just two videodiscs is a huge amount of accessible data in the form of maps, charts, photographs, text and moving film. 'It would take seven years for someone working a 40-hour week to go through it from start to finish' (Gold, 1986, p12). The information includes 50,000 photographs and 250,000 pages of text. This comprises 2,000 articles from sources ranging from Hansard to the Sun newspaper. Over 14,000 schools and voluntary organisations provided information on local history and land use. There are also over 100 film clips from BBC archives. In addition, 9,700 data sets that represent 'the cream of the country's National Data Archive' are also included (Macdonald, 1986, p14).

The two discs are described as a 'national disc' that carries the academic data, and a 'community dics' that holds maps, photographs and the more personal data that was supplied by over a million adults and children. The approach to this information has been quite populist. Contributions have gone on to the discs with only a legal check - so the spelling mistakes and quirky views of the population are preserved for posterity. A national competition,

organised by the BBC, generated 20,000 of the photographs that are used on the discs.

Data on the national disc is treated with more rigour. The information comes from four main sources: the Economic and Social Research Council; the Department of Geography at Birkbeck College; the Centre for Urban and Regional Studies at Newcastle University, and the Institute of Terrestrial Ecology at University of Wales in Bangor. The data is organised into four topic areas: culture, economy, society, and environment. Within each of these areas a large number of separate subjects are covered. Statistics are present on everything from religion to water resources, or from transport to personal finance. All of this information was already held in the public domain, but in traditional form, it was too unwieldy for public use. In this new form, the data has become more accessible and manageable. Data is first presented in tabular form, but the press of a button can transform the figures into pie charts, bar charts of shaded maps. The indices of graphic representations can be altered for the fine-tuning of displays. The information can also be offloaded into other computers for research purposes.

The whole of the information on the Domesday discs is easily accessed and manipulated by means of a moving screen cursor controlled by a rollerball or mouse. Access can be achieved through maps of decreasing scale, which gives the effect of descending on a particular location from a great height. Alternatively, menus or word-recognition routines can be used to find data and functions.

Such a vast amount of information, of different types, stored on two discs and easily accessed by non-specialist users is a demonstration of precisely what is new about videodisc. Peter Armstrong, the director of the Domesday Project, sees videodisc as having a profound effect on the way information is used in society. He says that the aim of Domesday, in terms of social data

> "... is to make it available to the man and woman in the public library, the pupil in the school, the student in the university." (in Macdonald, 1986, p14)

The ultimate impact of the technology on a society is difficult to assess but some see it as having considerable implications. Gold, for instance, sees the holding of information as an expression of power, and views the development of accessible, manageable and

attractive databases as precursors of an 'informed democracy' (Gold, 1986, p12).

Within education the Domesday Project can be seen to have a wide appeal. Professor Wragg of the School of Education at Exeter University has commented on the immediate value of the discs for use in geography, environmental studies and mathematics (in Macdonald, 1986, p.14). But it is hard to imagine a discipline that would not find some value in the discs. Sociology, politics, biology and art - the appeal of the discs would seem to be universal. There also exists the possibility of cross-curricular use. For instance, it is possible to take 'surrogate walks' through a variety of environments: a farm, a council estate, and so on. These places have been photographed, mapped and organised on the discs in such a way that progress through the material 'feels' like a walk. From any point, 360° views are possible, and a user is free to explore. Certain houses and rooms can be entered, and even the contents of handbags, drawers and cupboards can be discovered. Any number of learning objectives, for many subjects, and at a variety of levels, could be generated from this facility.

The John Rylands Library in association with the Geography Department at the University of Manchester have purchased a Domesday System and discs. The library felt that it was important to give students the opportunity to experience modern data storage techniques. The Geography Department felt that the maps and social statistics would be of value to students in research project work. An early evaluation would suggest that the novelty of the new technology is a major attraction to experimentation. Many people have used the facility to chech data on their home town or look at where they have been on holiday! Even use such as this is not without value as it amounts to a short course in technological familiarisation. Beyond this, there is evidence to show that the databases are being used by students for research, and that the facility to compute areas and distances directly from maps is useful. At this level, for this subject, much of the community information has only curiosity value and is soon ignored. School users report the system is used to support project work, where data and general information may well be used. Importantly, though, the system is used as a demonstration of a new technological form, thus becoming a subject of study in its own right. The generation of a healthy

sense of 'future shock' is a prime goal for much use in schools. The above comments about typical deployments of the system are the result of informal discussion with users in the university and schools.

For all its value, the Domesday Project has not been without problems and detractors. In the first place the Project has done little to ease the chaotic lack of standardisation in the industry. On the contrary, the chosen method of storing computer data on the second audio track on the disc has led to a further fragmentation. Any school or college making the investment in Domesday has no guarantee of compatibility with other systems and discs. In fact they would be forced upon a reliance on BBC supported publications at the expence of all others. For this reason, Freeman is also to classify the Domesday Project as a 'Rolls-Royce' application of the technology, and he sees it as having little relevance to the needs of schools (Freeman, 1987, p57).

Currently, the system retails at approximately £4,500 including the discs. This amount of money is a powerful disincentive for schools and colleges in the current economic climate. Megarry suggests that the Domesday Project has only achieved limited success because

> "... as a high-priced, non-standard system it seems both to have priced itself out of the education market and to lack credibility as a serious business tool" (Megarry, 1987, p60).

Nevertheless, Megarry does also add that the Domesday Project will have done much to raise public awareness of the potentials of the new medium. For real success, the enterprise would have had to notch up high sales to schools and colleges. This did not occur.

> "The DTI (Department of Trade and Industry) must be in cuckoo land if it believes that the majority of schools will be able to afford the special hardware necessary just to play two discs" (Fox, 1985, p82).

Fox was writing in 1985 before the discs were published. Since then the situation he anticipated has indeed arisen and has been countered by government action. The DTI, 'in an attempt to encourage curriculum innovation by means of the very latest information technology' (Hart, 1988, p88), has provided subsidy. Every local education authority has received a Domesday system, and teacher training institutions have also received one. As a result awareness of the

potentials of the medium should move on at a faster rate. The situation is far from ideal, though. The best that education authorities can do is to locate the Domesday system with other centralised resources, and permit schools to book the system for short periods. This will certainly allow many pupils to sample the new medium, but it falls a long way short of making interactive video a part of regular learning strategies. The development does show, however, that the government is willing to spend money on the promotion of interactive video. The role that the government has played will be discussed in more detail in the next section.

Now that the Domesday technology has come in to being, the BBC has a base upon which to develop further videodisc publications. Two discs are worth mentioning in order to illustrate the potential and growing appeal of the medium. The 'Volcanoes' disc is an exhaustive one-subject disc of the type discussed earlier. The aim is to provide a comprehensive account of one subject area. Obviously, authoritative texts in print already offer a wealth of knowledge on volcanoes. Moreover, the BBC possesses much relevant film of volcanic processes. The disc attempts to surpass the educative power of both these separate technologies by a combination that is a full expression of the interactive techniques that have been explained here. In effect, with 'Volcanoes' a user experiences a textbook in a new form, that is able to use moving pictures and situational sound when appropriate. In fact, the disc carries the whole text of the Oxford University Press book 'Volcanoes' by Dr. Peter Francis. The text can be accessed in a traditional way, page-by-page. But computational power permits detailed indexing of the work through a 'find' facility. Highlighted words used in the text are linked to a bank of 1500 definitions that can be accessed at the touch of a button. The disc is hurther enhanced with still photographs and animated diagrams to aid explanations. The system can be used for classroom presentations by teachers, but also permits independent study by students. The BBC claims a wide range of applications for the material - ranging from primary schools to undergraduate level.

Another disc, entitled the 'Ecodisc' approaches educational concerns in quite another way. The disc is based on a real nature reserve in Devon. Surrogate walks of the type already described can be taken around the reserve - a guide is available if required.

The features of the reserve can be viewed in different seasons - the ecosystem of, say, the forest floor can be examined in summer, or at the touch of a button, winter, and so on. The disc offers a detailed view of wildlife on the reserve, and even includes underwater sequences in ponds. The learning activities offered by the disc are largely centred on the warden's office. Users are free to look round; examine the in-tray; read a job description; scan the local newspaper or receive messages through the telephone-answering machine. On the basis of this information it is possible to simulate the running of the reserve, and a branching system offers different routes through the material according to decisions taken by students.

These two discs provide interesting illustrations of the application of the technology. To those users who have already invested in the Domesday hardware the discs could be an attractive proposition at well under £200 each. They do represent different types of application. The Volcanoes disc is very much a surrogate book and has its appeal in the way it outperforms print media. The Ecodisc is a much more activity-based project, that invites students into open-ended interactions towards a learning goal.

Domesday and its associated grogrammes have put interactive video systems 'on the map'. There is a real chance that many pupils and students will experience interactive video techniques over the next few years. Furthermore, teachers in training should become aware in greater numbers of the potentials of the new medium in education. There are signs that the publication of material specifically for schools and colleges is becoming a viable proposition. The fact that such material is available to schools now is an encouraging sign that interactive video may come to play a useful part in the modern curriculum. Again, the lack of standardisation in the industry and the high costs of getting started do still remain problems that must be surmounted, but the growth of interactive video has gained impetus from the whole Domesday initiative..

The Domesday Project was partly financed from its inception by government funds, and it is the government that added to the penetration of the project by providing for the system to supplied to educators. As far as education is concerned, the future of interactive video is inextricably tied to government policy. In the next section, government policy and the future impact of interactive video will be considered together.

SECTION SIX

Government Policy in Britain and the Future

In the previous section the importance of government support for the Domesday Project was commented upon, and the suggestion was made that the future of interactive video in education would be determined to a large extent by government policy. This section will look at the history of government involvement and make an evaluation of sponsored projects. On this basis, the developmental environment for interactive video will be appraised, and conclusions relating to the likely impact of interactive video in education will be drawn.

For government, the emphasis falls on interactive video as an industry, rather than as an educational tool. The will to promote interactive video is undoubtedly present, but this stems from the government's primary desire to engender the development of the information technology industries in general. Developments within education form a part of this overall strategy, but are no more than a part of the picture. Currently, interactive video enjoys a high profile for government and industry. For instance, in May 1988 the Confederation of British Industry held a conference to look at the role of interactive video in industry. The conference was opened with remarks from Lord Young, the Secretary of State for Trade and Industry. He urged managements to identify interactive video applications, and told delegates that the government was supporting initiatives in a range of areas such as education, marketing, sales, defence and the public sector (Reported in AV User, July/August 1988, No 4, p.4).

This view of interactive video as an embryonic industry has resulted in a tendency for funding to originate from the Department of Trade and Industry. Even those projects that are exploring school and college applications have relied on funds from the DTI, rather than the Department of Education and Science. As a result, the initiatives bear the firm stamp of the goverment's overall strategy in industrial matters. The government's political philosophy is not one that is happy with projects funded directly by government, nor does the philosophy allow for long term support and subsidy by government. Instead, the government seeks to encourage the development of interactive video in the commercial sector, and sees its

role as the provider of a platform from which such development can take place. From this view, some short-term funds are provided in order to 'prime the pump', but after this, commercial interests would be expected to take over. In education, polytechnics and universities have been free to direct some of their research funds towards interactive video, but the prospect of a sustained government initiative does not exist.

A typical expression of government policy is the establishment of the National Interactive Video Centre (NIVC) in London. Whilst taking no direct initiatives itself, the centre provides a forum for interactive video producers and their clients. Its role is to encourage the development of interactive video in general; to build up a database, so that up to date information is available, and to provide a 'contact house' for everyone involved in the industry. Public awareness is promoted through the existence of a standing display of a range of interactive video applications. Under the auspices of the centre, the British Interactive Video Association promotes further contact between users and producers. The government's policy is borne out here - it seeks to encourage and enable, rather than provide.

The financial constraints that currently exist in schools and colleges do not allow for mainstream education to become a prime mover in innovations relating to interactive video. The examples of applications and the range of glossy publicity on show at NIVC suggest that corporate trainers will be the first to make extensive use of the new technology. Nevertheless, the DTI has put resources into the use of interactive video in schools and colleges, and these projects are worth consideration.

The DTI has funded the Interactive Video in Schools project (IVIS) by providing over £3 million (Plummer, 1987, p.35). The project is intended to be formative in the sense that, the resulting discs could provide a model for subsequent commercial production. Eight separate projects have produced discs over a range of curriculum areas. In each of the projects, a design team based in a college, university or local education authority have developed a disc for use in schools. The discs address topics within french language, geography, design, science, teacher training, mathematics and life skills. The project is on a schedule that makes appraisal difficult at the moment. Thirty-two 'nucleus' schools supported the project

up until April 1987. The discs were piloted in a further thirty schools in the period up to September 1987. Since then a further thirty schools have joined the study, but no conclusions have yet been drawn. One external commentator has already been critical.

> "... these (packages) have made little impact and there is no prospect of commercial distribution in the near future." (Wade, 1988, p.21)

The project does seem to be flawed insofar as it depends on the entry of commercial interests for the discs to be publisher at all. Without such a development the discs will only ever be used in the few schools that helped to pilot the project, which seems a waste of effort and expertise. Viewed thus, the project can be seen to be much more of a pure research initiative, rather than an attempt to launch the use of interactive video in schools in general. Nevertheless, eight models of disc production are available, and the skills required to handle the new medium must have advanced incrementally for a considerable number of educators, administrators and producers. The IVIS project may yet bear fruit and justify government policy.

In the meantime, a second project funded with £2 million from the DTI is exploring 'a different tack' to the development of interactive video (Wade, 1988, p.21). The Interactive Video in Industry and Further Education (IVIFE) has a different educational sector in focus, and is utilising new methods. As such it represents a full-blown expression of government philosophy. IVIFE places very firm emphasis on commercial results. To this end the project has funded five separate schemes which are full collaborations between a college and a company. Thus the immediate appeal of the discs as training media is enhanced. Furthermore, each project will produce broadly applicable generic courseware that could prove to be marketable on a global basis. Subjects and approaches have been chosen with this requirement in mind. The five projects cover four subject areas that span the concerns of industrial training and vocational education. Discs will address the design, production and testing of printed circuit boards; cutting tool technology; the training needs of trainers, and team building.

IVIFE is a more recent initiative than IVIS, and have not been able to be judged by 1990. The design of discs should have been completed by mid-1988, and the technical testing of discs have been

taken until the end of the year. In the first six months of 1989 the discs have been piloted and appraised, and commercial marketing begun in the second half of that year. By this time the government's proposal to remove colleges and polytechnics from the control of local education authorities should usher in the era of colleges as companies in their own right. So the possibility exists that colleges and industry developed sales companies to promote their product in the pursuit of profit. As a development at the cutting edge of modern education and training, interactive video is coming to be used as a vehicle for the expression of the British government's radical restructuring of educational organisations.

In a climate where money is scarce in schools and colleges, collaborative projects like IVIFE offer the only real chance of the development of interactive video in education. Wade argues that the vocational leanings of further education leave it better placed than either higher education or schools to exploit this situation (ibid, p.21). He concludes that

> "The linking of industry and education reinforces the Thatcher philosophy of aligning learning more closely to the needs of commerce." (ibid, p.21)

The scenario offered up by IVIFE is encouraging for the development of interactive video in Britain. It does however represent a high-risk strategy insofar as if these seeds fail to germinate the chances of continued government support are remote. Furthermore, the very nature of these developments casts the state school system as the poor relation of the educational family. Beyond IVIS and isolated research in higher education there is no evidence of a commitment to the use of interactive video in schools, and so the scope for future development in restricted.

As far as further education is concerned, the Further Education Unit have commented that 'systematic and coordinated development work is urgently needed' if interactive video is to have a role to play (FEU Summary Report, IVIFE, p.3). Whether or not the IVIFE initiative represents such a thrust remains to be seen.

In higher education, Hart has called for 'national economic and organisational support specifically for higher education uses' (Hart, 1988, supp iv). Such assistance will not be forthcoming on the basis of government policy at present. Commercial marketing of the pro-

ducts of research, such as Brighton Polytechnic's Telsoft project (White, 1987, p.70) offers some prospects for development, but the overall impact of such initiatives is likely to be marginal.

In schools, the inroads made by Domesday may be further exploited, but other innovations may depend on the spread of low-cost tape-based systems that are steadily being developed. It is difficult to see where staff with the time, energy and expertise to develop such programmes will come from. Hart has proposed a three-point plan to argue the pre-conditions for the successful development of interactive video in schools and colleges (Hart, 1987, p.178). Firstly, he appeals for direct and sustained support from government. Secondly, he argues that there should be clear incentives, rewards and encouragement for staff who take an innovative role in the development of interactive video. And thirdly, he suggests that any developments need the support of a commitment to a programme of staff training and development. Only if these pre-conditions are met can 'effective innovation' (ibid, p.178) take place. There is nothing to suggest that these pre-conditions will be met from within the government's current support levels for interactive video projects. Beyond IVIFE and some current research in universities and colleges, it does not seem that British education is taking the necessary steps towards the proper development of the new technology.

To some commentators the possible failure of interactive video to develop is not a particularly great problem. Chambers, for instance, complains that picture quality is inferior to colour transparencies and printed photographs, and suggests that it is an audio-visual aid that is too expensive for schools in any case (Chambers, 1987, p.24). To others, interactive video offers a qualitative leap in the way a whole society could come to store and process data, and so the involvement of educators in an era of rapid technological change is vital. The following example illustrates this general view.

The McDonnell-Douglas aerospace corporation in the USA has begun to use interactive video in the workplace. Manuals for the service and repair of aircraft are now held on videodisc. Engineers gain access to the manuals through a radio link that relays the information to a sound system and a small television screen that is held within the engineer's helmet. Without coming off the aircraft, and without losing contact with the component under repair or

scrutiny, the manual can be referred to. The usual advantages of freeze-frame, slow-motion and repeat are available. The central computer can log all usage and identify the key problems of maintenance and repair. McDonnell-Douglas are making great claims for the effectiveness of the system. They report a 90% improvement in 'accuracy', a 60% reduction in 'time' and a 90% reduction in the bulk of documentation. The system has the further advantage of being centrally updated, instead of reprinting and redistributing manuals (Dowling and Camstra, 1987, p.147 and Griffiths, 1986, p.173).

This current application of interactive video techniques offers evidence of a communications revolution in the making. Methods of data storage, processing and access are changing rapidly. Along with this, the nature of work and ultimately perhaps a whole way of life may change. Many of the references used in this study were generated from a computer search of a database held on laserdisc. Against this backdrop, of rapid change in information technology, it seems logical to suggest that schools and colleges should be in the forefront of experiment and application. The danger is that an enforced fixation with print will disqualify education from any substantial relevance to life in the next century.

> "The work now going on in videodiscs will help to set the tone and style of education in the twenty-first century; by that time someone will have produced the videodisc equivalent of the novel and the book as we know it will have become the papyrus of a bygone age." (Clark, 1987, p.73).

An argument has been advanced here that puts a premium on the development of interactive systems in education. The new technology of interactive video has been judged to have the cabability to sweep away the limitations of all previous systems. The combination of video and computer represents a qualitative advance in the strategies available for mediated education. Furthermore, the general application of laserdisc technology in society represents the highest expression of the changes that are occurring in information processing. In short, the videodisc is

> "... the medium par excellence for the next generation of implements designed to help people think and to gain understanding." (Clark, 1987, p.72).

This potential of the medium has been explored, both in terms of actual and possible applications. This exploration has offered many

exciting prospects, but an examination of the context in which such changes would have to occur, has led to a moderation of expectation. The Domesday Project has been seen to be a positive contribution to the development of interactive video in schools, and a small but steady increase in the amount of disc based material has offered further encouragement.

The specific nature of government support for interactive video has been considered, and this has offered more comfort for those interested in industrial applications than for those hoping to see a firm commitment to educational application. The whole technology and the associated government projects are so young that as yet there are no clear indications of outcomes. The vagaries of the market-place will have a more powerful effect than the wills of educators.

Finally, the imperatives for the development of interactive video in education have been considered. It has been argued here that a failure to master the new technology amounts to more than just the loss of a sopphisticated learning machine - potentially, interactive video systems are the harbingers of a social change that the education system must have the opportunity to embrace.

At this early stage, and without the evidence of strong government support, only the cautious optimism, based on signs that a gradual incrementalism is holding sway, can be sustained. There are more systems available, across a range of costs; there are more discs being published, and there are more teachers gaining awareness and expertise of interactive video. Economic and institutional difficulties abound, but over time it is becoming easier to draw the conclusion that

> "... the widespread use of interactive videodiscs must still be a few years away. This is only the beginning, but the hardware is there, ready and waiting, if the teaching profession wishes to take up the challenge it offers." (Laurillard, 1983, p.36).

SECTION SEVEN

The Facilities of Interactive Video Will Bring To The Open Education Faculty of Anadolu University - Turkey

In Turkey there has been an increasing demand for the past two or three decades for university education. For this reason, the

distance education system has gained more importance than ever. The Open Education Faculty of Anadolu University has always been an alternative for the university student canditates. For this, the Open Education Faculty;

* has primarily carried out the studies on the need for university education in Turkey in terms of quality and quantity,

* has tried out to built up the necessary strategies in providing and using of the necessary means to cover this need,

* has finally trained the qualified technical and academic staff and the legal structure to start and carry out the distance education in the country.

Thus, the Open Education Faculty has aimed to find a solution for the great demand for the university education in Turkey and it can be said that this aim has been reached.

Here it is necessary to mention a characteristic of communication technology employed by all distance education systems. As known, distance education systems employ mass media which are the products of communication technology for educational purposes. There-fore, the recent developments in communication technology are included in the distance education systems in terms of their contribution to this aim. Every development in communication technology reduces the cost of the system and activates the processes. Therefore, all the educational institutions undertaking distance education have to be sensitive to the technological developments in communication field and have to follow them. Otherwise they will be in danger of not being able to catch up with the requirements of the age as in the traditional education system. (Barkan and others, 1990, p.32).

It must be beared in mind that the Open Education Faculty has to keep up with contemporary means of communication and their constantly improving technology.

As it is mentioned in the previous sections, interactive video (IV) is a new product of communication technology. It seems to be a very efficient and useful medium. It has almost all the necessary characteristics of the other communication means. In other words, with the use of IV in distance education for educational purposes, a very efficient means of communication will be employed. Consequently, the following questions should be taken into consideration;

* How can the use of IV contribute to distance education systems?

* How can "IV teaching" be used in the Open Education Faculty activities?

It can be thought that the Open Education Faculty has had to employ many communication means for educational purposes. These are books, radio, TV and face-to-face communication:

* Books are the primary means in that they convey constant messages, give way to individual learning and they are relatively cheap. They also prevent students from spending money on and they are not effected by atmospheric conditions.

* Television is an important secondary medium because it is an audio-visual means.

* Radio is an audial means and it supports education.

* Depending on face-to-face communication, academic advising services have takenn place as a secondary means.

What is more, it has been stated above that there is another supportive service given through the press with the purpose of helping the students in their problems like loneliness and alienation.

Here it is observed that four media for different educational purposes and functions have been employed by Anadolu University. This means that the Open Education Faculty has to spend great amount of money to carry out its educational services.

It is observed that in terms of educational communication standarts "IV" has all the necessary qualities except that the equipment is too expensive of having a priority as an education medium among others to be employed in distance education. Yet, books and academic advising are still very important means for the Open Education Faculty students.

Radio and TV will be employed as supportive means - due to their communication characteristics and their usage - together with the written media.

Through such an approach it is possible to develope a model for the use of interactive video in the distance education carried out by Anadolu University.

The functions of the media and their place within the system are as follows;

* IV with its characteristics may become a primary means for educational purposes.

* Books may become secondary educational means in this system.

* Thirdly academic advising (teaching) services may take place in the system. These services can be supported by IV programs.

* TV and radio broadcasting together with Anadolu Newspaper (the newspaper acting as a link between the Open Education Faculty administration and the students of the faculty) may be employed in the new model. They can have both educational and supporting functions. The characterictics of these media enable them to have the two functions mentioned above is that they are both mass media depending on the main principle news-giving.

* Examination-services coordination and local student information bureaus will carry out the same functions in this new model.

IV is thought to be a very efficient and useful means in distance education. However, being very expensive -beyond students efforts- make it almost impossible to buy and use it individually by students.

At this point a regulation must be mentioned, which was named as "The Law of Cinema, Video and Music Administrations" having the purpose of contributing educational, cultural and national functions to the works mentioned above.

In order to achieve this for the video programs to be used in education no registration tax will be demanded by the government. This law has been of great support for the Open Education Faculty in Distance Education Model in Turkey. (Since IV was not that common at that date, it wasn't included by the mentioned law. For this reason the law should be re-organized)

Another important point on the use of IV for educational purposes within the Open Education Faculty system is the localization of this service. For this, it is suggested that IV services can be placed as the seventh one along with the other six services which are; radio and TV broadcasting, coordination of the examination services, academic advising services, written materials, "Anadolu" newspaper, student information bureaus.

IV Education Services are planned to be carried out mainly in two phases:

i) Setting up the Interactive Video Education Center (IVEC) in the body of Open Education Faculty,

ii) Setting up Interactive Video Education Libraries (IVEL) in the student information bureaus in local provinces.

In the distance education there is a great necessity for the use of IV because:

* The message through IV is "constant".

* The message is constant and it can be repeated if required. Repetition is necessary for "reinforcement". Therefore it is not possible for a TV or a radio program which is broadcasted once and which cannot be repeated to give a constant message.

* Any communication activity must have the feature of reinforcement in order to be educational.

* Reinfocement can only be realized in education through repetition.

* To have "repetition" the message must be constant.

* The message should not be audial or visual only. The media should combine these two characteristics i. e. it should be both audial and visual. It is possible to achieve this through IV as TV. Yet the message is "constant" in IV, and there is another reason why IV has the most educational characteristics: IV education makes students join the education process because every program will be prepared in consideration with their demands.

IV may open many doors to the users due its structure. For this reason the programs should be prepared carefully. Moreover, the message should direct this target towards an participation, which is an important factor for the process to be effective. That is to say, the process should be both "teaching" and also "learning" process.

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