

Pattern of usage of various electronic media by higher education students

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ABSTRACT

This paper provides an analysis of the different investment-centric educational media from the perspective of the student users in urban and rural areas of Tamilnadu in India. Points of feedback have been derived on both mass and personalized media namely radio, TV, internet, compact discs and teleconferencing. Field-experts' observations supporting the utility of various media have been presented. As primary data, the respondents were requested to provide information on the frequency, timing, and place of usage of each media and were asked to report their feedback on the usefulness of these media. The various demographic variables are associated with media usage patterns. The main findings of the analysis suggest that the internet is comparatively more-utilized among the media. Radio and TV are under utilized because of lack of awareness and non-availability of signal.

Keywords: *Educational media; Gyanvani; Gyandarshan; CWCR; Internet; Usage pattern; Possession of media; Mode of Study; Anna University.*

INTRODUCTION

On the one hand, there have been *huge investments* by the educational sector on the establishment and maintenance of educational media for students. On the other hand, there has been *very little and sporadic knowledge* about the usage of such media in education. There is a need to understand the *opinions* of the target group on the functioning of the educational media and to elicit their *suggestions* towards the improvement of educational media in terms of content, duration, timings and methods available through them. Media had to be viewed on a comparative note in order to identify the more effective ones among them.

While the growth of the electronic media of radio and TV in terms of reach, popularity and variety has been phenomenal, there has not been a corresponding growth in their education-related usage. Lack of publicity about the contents and timings of the programs, inability of one's electronic equipments to receive the signals and lack of interactive nature of their programs have contributed to the under-utilization of these educational media. In the case of internet, the problem has been one of access and affordability. Rural students are said to have less familiarity on the availability and contents of various media inputs. Similarly, the students of distance education and regional language medium classes also have been facing limitations in their utilization of educational media resources compared to regular streams and English medium classes.

The objective of the study included identifying the variations among the students of different demographic characteristics in terms of their media usage.

REVIEW OF LITERATURE

As part of the study on various media usage patterns among the students of the state, the researcher carried out an extensive review of literature to identify the various issues and perspectives with regard to the area of focus.

Radio is playing a significant role in reaching, informing and educating people. Radio is still a dominant medium with wide access. Computers and internet have started influencing the way we learn. All these media are very powerful to reach, teach and enrich. But learning from them is quite different from reading a book according to Singhal and Rogers (2001).

Reports confirm that educational Radio programs have been tried out in a wide range of subject areas in different countries. In Thailand, the radio is used to teach mathematics to school children Galda (1984) and for teacher training and other curricula Faulder (1984); In Mexico, radio was used for literacy training and other programs Ginsburg and Arias-Goding (1984); In Nigeria, radio was used for management courses for the agriculture sector Shears (1984); The Philippines used the radio for nutrition education Cooke and Romweder (1977); The Dominion Republic used radio in support of primary education White (1976); Paraguay used radio to offer primary school instruction according to the Academy for Educational Development (1979).

Radio in education can provide useful answers with diverse learners to solve easily, according to McLeish (1999). Mason (1994) has stated that radio can be valuable in distance learning milieus ranging from schools, colleges and universities, from commerce and industry to public sector organizations. Moreover, radio programs can provide flexibility and openness, and easy accessibility to knowledge as well as better higher-order thinking and skill improvements with high-tech learning environments. Radio can create new distance milieus in which learners are able to take greater responsibility for their own learning and constructing their own knowledge according to Resta (2002). Moore and Tait (2002), focusing on the use of new communication technologies in distance education systems such as e-learning, stated that educators and trainers give up working with radio as a low-tech educational tool. Radio has a unique power to create better interactive distance education environments itself than do emerging communication technologies, which can empower the capacities of radio when being used together in distance education systems. Radio, moreover, provides life-long learning, professional updating, in-service training and community education from a cradle-to-grave position, which is independent of not only place but time as well. Mason (1994) Learners, for that reason, can gain knowledge about themselves without feeling any digital diversity to share and exchange their experiences with others to promote their understanding with other learners from different culture.

Learners can share and exchange their ideas, beliefs, opinions, knowledge, and information with others in interactive distance educational radio programs synchronously and/or asynchronously according to Crisell (1994). Also, learners and instructors can collaborate with any experts and learners from any places in the world. Synchronous education allows all distance learners taking their educational session at the same time, and interactivity occurs at same time. Synchronous communication in interactive distance radio programs allows live interactions among learners, instructors, experts, resources, etc., as per the views of Bonk and Cunningham (1998).

With the technology growing in leaps and bounds, education does not stop at the borders of the campus and Television (TV) offers another way to reach out into homes and serve people where they live Reddi (1994). Where TV is supposed to be the most effective one. Mohanty and Rath (1990) made an appraisal of Country Wide Class Room (CWCR) TV Programs. Among other things they found that the knowledge objective has been realized to a great extent in all the programs whereas understanding and application objectives have been realized to a great extent in 60% and 52% of the programs respectively. Jaiswal and Goel (1991), referring to the CWCR

programs suggested that different pedagogical fields such as methods, media, techniques, devices, aids and formats have to be well selected.

There are several pointers to suggest that television, if used appropriately would be one of the powerful educational media.

"Tests showed that students did significantly better when they viewed the lessons that demonstrated planned visual continuity, contained visual reinforcement, and had been the result of a team approach to make effective use of the TV medium." Chu and Schramm (1967).

Without the ITV technology students would have limited access to courses" said Garland and Loranger (1996). According to Ranganathan (2002) watching TV is popular among students and not all of them watching TV for entertainment alone. Considerable numbers among them are on the look out for useful and usable information. They seek information that will enhance their general awareness and help them in their educational pursuits. Among the TV viewers there are some who watch CWCR occasionally. Ways to hold on to the existing viewer ship by enhancing viewer interest in our programs and attract others by extending the scope of programs should be found out. It is imperative that the programs are different and contain something special to get noticed among the plethora of programs offered by various channels. The focus ought to be not on undergraduates but all the information and knowledge seekers. It is necessary to produce need based programs such as preparatory courses for those who take the competitive examinations at various levels. Promotion of CWCR through cross channel publicity is absolutely essential. TV expansion in years has been phenomenal. TV covers over 85% of the country's population. Cable TV is largely used for entertainment but it has great potential of being used for education as well according to Yadava (2000).

Saiprasad (1991) carried out a study to elicit opinions and expectations of students and teachers on CWCR programs. The results implied that there is a need to be conscious of the entry skills of the target group, to produce programs which require student participation and to integrate the CWCR programs into the collegiate education. According to a study Saiprasad (2001), higher education students seek information on education, career guidance, career advancement and a host of other areas through the internet.

Research has indicated that computerized learning motivates students to invest more time in a subject-area (time-on-task), in particular when the student can work according to his own pace and time schedule, as described by Worthen, Van Dusen and Sailor (1994). This also happens when the system creates extra possibilities for the student to communicate with other students (through e-mail, bulletin boards and computer conferencing). The enthusiasm of students working with the WWW is a clear illustration of these research findings. Research has shown that using computerized learning can reduce the necessary learning time of students to two-third of the time needed in a conventional course, as per the observations of Kulik and Kulik (1991).

Internet enables citizens to have access to anything and everything of their choice – books, news, bank accounts, shopping, databanks, friends, peer groups and interest groups – and at a time of their choice without stirring out of the comfort of their homes with a flick of buttons on their remote control and computer keyboard. Voice-activated signals may even do away with all this trouble of pushing buttons. But one may have to pay tolls for using internet. 'Unparalleled and unlimited human connectivity and interactivity without stirring out of homes, is set to transform intellectual, cultural, economic and political life' says Yadava (2000).

Internet-based emerging communication tools, such as e-mails, bulletin boards, etc., provide more reflective and useful interactions among learners, instructors and resources according to Picciano (2002). The researcher found that, in the field of education, TV has assumed immense importance not only in terms of its reach but also in improving the quality of education at all levels

and promises to play a major role in educational endeavors, towards upgrading as well as enrichment. Web-based course delivery offers a complex learning and teaching environment. A vibrant learning community can be created using different teaching strategies, activities, and technologies. Thus, review of literature suggests that the number of educational courses that depend on modern educational media, more so in case of distance education. Education has become media technology enabled worldwide.

METHODOLOGY

Methods play a major role in research. This study has adopted the survey method and descriptive research design. The universe or population of the study consisted of the entire set of student population in the graduate level in the state of Tamilnadu. According to the statistical handbook 2005, a total of 7.02 lakhs students are studying of under-graduation (UG) in various colleges in Tamilnadu. A total of 14,000 respondents (2%) of the universe have been covered as the sample. The sample for this study was selected from among the UG students of regular - distance mode and urban - rural students. Samples were drawn from different type of colleges like Arts, Science, Commerce, Engineering and Technology, Medicine and Agriculture. Totally 14 places were selected for this study including seven major cities and seven small towns. Data were gathered using a self-administered questionnaire prepared specially for these purpose. Over 1,000 questionnaires were collected from each place. Based on the average of incomplete responses, the researcher has taken up 840 respondents from each place for the final analysis. The data was collected during the period from January 2005 to March 2006. Total numbers of respondents whose responses were taken up for analysis were 11,760. The chi-square test, simple percentage, Friedman's two-way anova and cross-tabulation were used for the analysis of this study.

Data Experiences

The researcher observed that many of the students had come to know for the first time, about some of the media opportunities available, only at the time of research, by going through the questionnaire. The students expressed regret about the fact that no one had briefed them about the need to use various educational media. The researcher also found that management bodies of many colleges were quite averse to the idea of researching media usage among their students. A notable facet that was exposed during the data collection was that many Principals and faculty members were ignorant about the latest educational media and programs available.

USAGE OF VARIOUS ELECTRONIC MEDIA BY HIGHER EDUCATION STUDENTS

The ensuing part of the article presents the demographic details of the respondents in terms of their place of living, gender, age and academic details like the courses pursued by the candidates and their modes of study.

Sample Composition

Students of regular mode of study and distance-education mode are likely to differ on several characteristics such as time of direct interaction with faculty members, employment status, time available for education and opportunities to keep oneself up to date in their field of study. Considering these differences, the researcher thought it necessary to consider viewing the two modes of study as separate groups for further analysis of their responses. There have been exactly equal numbers of respondents from regular as well as distance education streams. Exactly 50% were students in regular mode of study while the remaining 50% were in distance

mode. Thus, it may be seen that the mode of study has been taken as the prime parameter for the stratification of respondents.

There have been more male respondents than female. (56.90% were male while the remaining 43.10% were female). This percentage, though unequal in numbers, could be stated to reflect the same proportion of men and women enrolling themselves for studies in the universe of the study. Needs and wants of people tend to differ with their age in general. Further, age factor could heighten the level of exposure a person is likely to have. Since all the respondents were students, a vast majority of them would belong to a narrow range of age group, namely 17 to 30. Hence their age groups were grouped at narrow intervals. 6146 (52.26%) belonged the age group 17 – 20, while 4438 (37.74%) belonged to the age group 21 – 25 and the remaining 1176 (10%) were above 25 yrs. Thus it may be seen that the study has covered more of undergraduate students, reflecting their relative proportion in the actual student population.

The researcher felt the need for diversity of respondents in terms of the courses they pursue, so as to bring in the pluralist perspective on the usage of media. Out of the total, 28% have their course of study as B.A. while 33.33% have their course of study as B.Sc., and the rest of them pursued B.E, B.Com and other courses. More than nine of ten respondents 93.33% have had English as the medium of instruction while 6.67% have Tamil as the medium of instruction. Of the respondents, 50% belonged to Institutions located in rural area. While the remaining 50% belong to Institutions located in urban area.

Possession of Various Electronic Media

Educational Media could take multiple forms. They could be either mass-based or personalized, containing materials in audio or visual formats. Using them regularly would require the personal possession of the instruments appropriate for each.

A comparison of possession patterns with respect to different instruments shows that the costs involved in owning an instrument is inversely proportional to the number of people owning them, the only notable exception being TV, which occupies the second position among the instruments owned closely following the radio sets, despite involving a higher initial investment compared to tape recorder or telephone, which are owned by fewer respondents. The appeal of TV as a media could be understood from the emerging analysis. It is noteworthy to find that 90.24% possess radio, 86.43% possess tape recorder and 96.31% possess TV while 71.90% possess telephone. Merely, a 35.24% possess Personal Computer as compared to 61.31% who possess Satellite/Cable connection, 20.95% who have access to Internet and similarly, 49.64% who possess CD player.

USAGE PATTERN OF RADIO BY HIGHER EDUCATION STUDENTS

Distribution of Students by Listening To Radio

From the radio listening group 35.71% of the respondents listen to radio everyday a week, while 5.12% listen to radio 4 to 5 days a week, 8.93% listen to radio once a week and 12.86% rarely listen to radio. It is found that 18.10% never listen to radio. Combining the segment listening to radio every day and at least 4 to 5 times a week, it may be stated that the majority of respondents tend to be frequent radio listeners. However, there remains to be a sizeable segment of nearly one third of the total respondents whose radio usage is almost non-existent to produce any impact.

Approximate Time Spent On Listening To Radio

While 30.36% listen to radio less than 30 min., 27.74% listen to radio 30 – 60 min., 18.10% do not listen to radio, 13.57% listen to radio 60 – 120 min. and 10.24% listen to radio above than 120 min. With regard to the time spent on listening to radio, the emergent data shows a divergence among respondents, with respondents' time ranging from nothing to two hours a week, which could be interpreted to be offering a considerable scope for increase.

Place of Listening To Radio

Summing up the responses, it is found that 87.35% listen to radio at home, 23.11% listen to radio at friends place. Others listen to radio at their office; place of study or at cyber cafes. Data indicate that home is the place where most of the respondents have been listening to radio, thereby suggesting that timing of the educational programs through radio should match with the time when people are at home.

Listening to Radio Programs

With a view to ascertain the purpose of listening to radio, respondents' listening patterns were further enquired. It was found that 37.06% listen to radio for education, 84.30% listen to radio for entertainment and 29.07% listen to radio for Science. 5.23% listen to radio for purpose other than those mentioned above. Analyzing the data on the purpose of listening to radio, there seems to be scope for improvement as the majority of respondents have reported that they do not listen to radio for education or for Science programs.

INTERPRETATIVE ANALYSIS ON RADIO

Listening to Radio and Mode of Study

Table 1: Listening to radio and Mode of study

Listening to radio (per week)	Mode of study		Total	Chi-square value	p value
	Regular	Distance			
Every day	2254 (2100.0)	1946 (2100.0)	4200	363.50	0.000**
4 to 5 days	672 (889.0)	1106 (889.0)	1778		
2 to 3 days	350 (546.0)	742 (546.0)	1092		
Once	504 (525.0)	546 (525.0)	1050		
Rarely	910 (756.0)	602 (756.0)	1512		
Never listen	1190 (1064.0)	938 (1064.0)	2128		
Total	5880	5880	11760		

Note: The value within bracket refers to Expected frequency.

** denotes significant at 1% level

Since p value is less than 0.01 there is a relationship between listening to radio and mode of study.

Hence it can be concluded from Table-1 that there is a significant relationship between listening to radio and mode of study. This means that the two streams would differ in their usage of radio, as they have similar syllabus but dissimilar teaching-interaction process.

Listening to Radio and Area of Institution

Urban and rural milieu of students tend to differ in the available levels of exposure to co-curricular events, access to educational services like counseling and library services. In the absence of multiple forms of educational assistance, there is a greater likelihood of students becoming dependent on the mass media as a one-stop source for the fulfillment of their educational needs. It was with this assumption that the researcher endeavored to examine the association between place of study and the patterns of listening to radio. It was concluded that there is significant association between area of institution and listening to radio. The result of this analysis could mean that media planners would have to focus on the target audience according to their place of study. Programs might have to be tailor made to suit the specific needs of the two categories of students.

Listening to Radio and Medium of Instruction

The medium of instruction in higher education in most of the cases remains to be English, while the mass media offer contents both in regional languages and in English. In order to identify the possibility that mass media like radio caters to students with concerns about the medium of instructions, chi-square analysis was done to find out if there is any association between the two variables.

It can be concluded that there is significant association between medium of instruction and listening to radio, which could indicate that language plays a vital role in out-of-classroom learning. Media planners need to carefully address the issue of medium of instruction used in radio as well. With the help of primary data, it was also concluded that there is significant relationship between course of study and listening to radio. The relationship could be interpreted as arising out of the differing requirements between various types of courses. Whether these differences are also affecting the time spent on listening to radio, is to be analyzed further.

Approximate Time to Listen to Radio

Having established the fact that radio usage is unmatched with the supply, the researcher has undertaken to analyze the various factors that could further influence the increase or decrease in the usage patterns. This analysis is carried out in order to find clues that could be valuable in making students listen more actively to the medium. There is significant association between mode of study and approximate time spent on listening to the radio. The implication of this finding might be that different strategies would be necessary to address the distance and on-campus learners, as far as improving the time spent on listening to radio. Also there is significant association between the area of institution and the approximate time of listening to the radio. Rural and urban students spend different amounts of time listening to radio, and within the attention spans of each of the categories, programs should be able to convey the important messages. In the same manner it was concluded with the help of chi square analysis that there is significant association between medium of instruction and approximate time to listen to radio.

Hence it is felt necessary to look into the familiar lingua franca of the local population if the average duration of listening has to be increased. The study also proved that there is significant association between course of study and approximate time to listen to radio. This implies that the

media planners should conduct audience research and find out the subjects for which the demand for radio programs are higher and broadcast them accordingly.

USAGE PATTERN OF TV BY HIGHER EDUCATION STUDENTS

Distribution of Students by Watching Pattern on TV

TV tends to occupy a coveted position among the media because of its audio visual presentations. The analysis portrays the respondents' viewing patterns.

Table 2: *Watching Pattern of TV*

Watching pattern of TV	FREQUENCY	PERCENTAGE
Frequency of watching TV (a week)		
Everyday	7686	65.36
4 – 5 days	1498	12.74
2 – 3 days	700	5.95
Once	686	5.83
Rarely	644	5.48
Not watch	546	4.64
Total	11760	100.00
Approximate time spent on watching TV		
> = 5hours.	896	7.62
3hours. – 5hours.	1988	16.90
1hour. – 2hours.	2478	21.07
30 min. – 1hour.	3430	29.17
< = 30 min.	2422	20.60
Did Not watch	546	4.64
Total	11760	100.00
Place of watching TV		
Home	9716	86.64
Study Place	714	6.37
Friends place	2828	25.22
Office	406	3.62
Cyber cafes	616	5.49
Programs generally watching on TV		
News	7840	69.91
Education	3934	35.08
Entertainment	8792	78.40
Other programs	392	3.50

Frequency of Watching TV

Data on viewing time suggest that 65.36% watch TV every day in a week, 12.74% watch TV 4 – 5 days in a week, 5.83% watch TV once a week and 5.48% watch TV rarely and 4.64% do not watch TV (Table 2). From the data on TV viewership, it may be observed that majority of the respondents watch TV every day in a week and that it is a very small segment which abstains from watching TV totally. This response pattern reiterates the general perception about the popularity of TV among people.

Time Spent on Watching TV

In order to verify the dependence on TV, respondents were requested to provide data on the time spent on watching TV. The analysis brings out the data on this question. Since media planners and analysts have divided TV slots into durations closer to 30 minutes, this duration was taken as the minimum period. 20.60% watch TV < = 30 min., 29.17% watch TV from 30 min. – 1hour., 21.07% watch TV for a duration between 1 to 2 hours, 16.90% watch TV from 3 to 5 hours and 7.62% watch TV for more than 5 hours (Table 2). A closer look at the data presented in the table shows that the majority of the viewers' spend not less than an hour on an average and this would imply that educational TV programs should also time their programs accordingly.

Place of Watching TV

With regard to the place of watching TV, the response pattern has shown a striking similarity with that of radio. A vast majority of 86.64% of the students watching TV at home (Table 2), 25.22 % watching TV at friends place and the rest of the people watching TV at other places like study place, office or at cyber cafes.

Programs Watched on TV

Analyzing the purpose of watching TV, it is seen that 69.91% watching TV for news, 35.08% watching TV for education, while 78.40% watching TV for entertainment, 3.50% watching TV for other than those mentioned above Table 2. The pattern of data shows that viewing TV for education purposes should be enhanced among the majority of the students.

Types of Material/Content Watched by Students on TV

Respondents expressing opinions on the contents watched on TV were sought with options for multiple responses. Results showed that, out of the total respondents, 68.12% watched subject-based programs on TV, 38.12% watched scientific programs and expert lectures, 46.77% watched interactive programs, while 58% watched career guidance, higher education information on TV as presented in Table 2. Interactive video can improve student attitudes and results in increased participation.

Distribution of Students Watching University Grants Commission – Country Wide Class Room (UGC - CWCR)

Among the educational programs, a pioneering initiative under the aegis of the UGC was its CWCR. Respondents were enquired on their usage of these unique programs. Of TV watching respondents, 14.61% watch UGC CWCR while 85.39% do not watch UGC CWCR. The results show that a vast majority of the respondents do not watch the programs, even though there are specific programs to suit every student group's needs.

Frequency of Watching CWCR

17.95% stated that they watch UGC on DD1 every day in a week, while 11.11% stated that they watch UGC on DD1 4 – 5 days in a week, 14.53% stated that they watch UGC on DD1 2 – 3 days in a week, 13.68% stated that they watch UGC on DD1 once a week and 42.74% stated that they watch UGC on DD1 rarely. It is seen that even among those who watch the programs, majority of them do not watch even twice a week. Only a very small segment is deriving benefits out of the programs, about which there should be some form of interventions from the telecasters.

Reasons for not Watching CWCR

A segment of respondents who stated that the reason for not watching CWCR; opine that they were not interesting. 1063 stated that reason for not watching CWCR as inadequate interaction. 48.15% stated that reason for not watching CWCR was that they received no signal. As high as 74.90% stated that reason for not watching CWCR was lack of periodic information about it.

Knowledge about Gyandarshan (GD) and Receiving

Among the students covered by the study, as large a segment as 82.38% stated that they do not receive GD programs on TV. When compared with other educational programs offered by the Government, very similar results are found with regard to the GD programs. It is evident that there is little awareness about the telecast of GD. Since the percentage of population using the various educational telecasts is small, the focus of the analysis is shifted towards understanding the opinions of the small segment of users, about the effectiveness of these programs. As the programs have rich and varied contents, all the users might not need all the inputs. Hence the respondents were asked to estimate the percentage of programs which they found GD to be helpful.

Reason for not Accessing GD

A total of 1112 stated that they do not access GD due to non-availability of signal while 10684 stated other reasons for not accessing GD.

Format of Presentation Followed Mostly in GD

Expressing opinions on the content of programs, a sizeable segment (44.59%) stated that format of presentation followed in GD is mostly lecture based only. A perceptible section of 33.11% stated that format of presentation followed in GD is mostly lecture with demonstrations only. 4.73% stated that format of presentation followed in GD to be other than those mentioned above. From the data, it is obvious that the major form of presenting lessons has been lecture, which has been vouched as a dependable method for disseminating large quantity of information in a short period of time. However the programs watched by the respondents were apparently confined to lectures not complemented with value enhancing presentations.

Not accessing GD is an area of concern as it could render the investments made in producing educational programs and the costs of telecasting them as unproductive. The reasons for not accessing as stated by the respondents were analyzed, to know if it is due to any faults in the contents of the program. The analysis and results discussed so far have shown that mass media's reach is yet to expand in a significant way among students.

INTERPRETATIVE ANALYSIS ON TV

Watching TV

While both TV and radio are mass media, their audiences tend to differ in terms of their reach and extent of usage. Therefore, respondents' views on television were sought with regard to the same indicators of usage such as frequency, duration and perceived usefulness of the media, as used in the context of radio.

Table 3: Watching TV and mode of study

Watching TV (a week)	Mode of study		Total	Chi-square value	p value
	Regular	Distance			
Everyday	4186 (3843.0)	3500 (3843.0)	7686	671.76	0.000**
4 – 5 days	588 (749.0)	910 (749.0)	1498		
2 – 3 days	238 (350.0)	462 (350.0)	700		
Once	434 (343.0)	252 (343.0)	686		
Rarely	392 (322.0)	252 (322.0)	644		
Not watch	42 (273.0)	504 (273.0)	546		
Total	5880	5880	11760		

It can be concluded that there is significant association between the modes of study and watching TV. This association is found to be very much similar to that of radio usage.

Watching TV and Area of Institution

Association between area of institution and watching TV is significant. In respect of this variable too, there is similarity between radio and TV. Consequent to further analysis, it was concluded that there is significant association between medium of instruction and watching TV. Analyzing the result in the light of earlier findings, it is seen that there is inter-media consistency among radio and TV and hence a common approach could be adopted in planning and striving for greater effective usage of the two media.

The study also resulted in the conclusion that there is significant association between mode of study and approximate time spent on TV watching. The difference could possibly be the result of unstructured or inadequate time availability to students belonging to any one of the two modes of study.

Analysis of data showed that there was significant association between the area of institution and the approximate time spent on watching TV. Comparing the results with that of earlier findings, it is seen that differences do exist between the areas of institution on almost every parameter taken up for measuring usage patterns of both radio and TV.

There is significant relationship between medium of instruction and approximate time spent on watching TV. This result adds to the general belief that there must be separately designed programs meant for students belonging to different medium of instruction, rather than merely translated versions.

Watching UGC CWCR

The present study took up the task of examining the viewing practices in Tamilnadu between regular and distance mode, rural and urban areas. There is significant association between mode of study and watching UGC CWCR. Similarly there is significant association between area of institution and watching UGC CWCR. Further, among the respondents viewing the program very frequently, there are more urban students than their rural counterparts. Hence efforts are to be directed towards popularizing the program among rural audience too.

Also there is significant association between medium of instruction and watching UGC, CWCR. From the figures, it is seen that there are disproportionately higher levels of students studying in English medium than the regional language. However the frequency of Tamil medium students watching UGC CWCR is more than their expected frequency. Hence there is a great need to fill the gap by supplying programs in the local language. Watching UGC CWCR was also significantly associated to the course of study pursued by the students. In terms of the frequency, no clear picture can be said to have emerged among the courses as their relationship has not been linear. Initial negative attitude towards educational TV is likely to lessen over time and become more positive or neutral.

Receiving GD Programs

Mode of study can largely be differentiated in terms of the average age groups benefited, the level of expenditure on education and a host of other grounds. However, to eliminate bias, the researcher assumed that there is no significant association between mode of study and receiving GD program on TV.

That there is significant association between mode of study and receiving GD program on TV. This reinforces the initial surmise that the two modes would differ on maximum variables used in the study. Receiving GD program could largely depend on the area in which the place where the respondents mostly watch TV. Earlier the analysis on place of watching TV showed that home is the place most of them used for TV watching. However, in order to verify the data, the relationship between the area of institution and receipt of GD programs was examined. Hence it can be concluded that there is significant relationship between area of institution and receiving GD program on TV.

There is also significant association between medium of instruction and receiving GD program on TV. In this regard too, the emerging data is similar to that of CWCR and TV in general. It also can be concluded that there is significant relationship between course of study and receiving GD program on TV. The programs are not labeled to be meant as exclusively for students belonging to any particular mode of study. Hence it was assumed that the two are not seen as closely related. On a comparative analysis of the various results discussed in relation to watching educational programs CWCR or GD, it is seen that there have been significant relationships established between this dependent variable and all other independent variables taken up for the study such as the place of the institution, the mode of study and the medium of instruction. The results seem to stress the importance that is to be accorded to these variables while planning and implementing educational programs in various media.

USAGE PATTERN OF INTERNET BY HIGHER EDUCATION STUDENTS

Distribution of Students by Internet Usage

Internet being a media of recent origin has evoked the interests of educational researchers and media professionals alike. The various parameters of assessing the reach of this medium, such as favorable opinions on the medium, number of people using it, the frequency at which they use it and the time spent on Internet are analyzed.

Table 4: *Distribution of Students by internet usage*

VARIABLES	FREQUENCY	PERCENTAGE
Ever used internet		
Yes	10920	92.86
No	840	7.14
Total	11760	100.00
Using internet (a week)		
Everyday	2114	19.36
4 – 5 days	1624	14.87
2 – 3 days	2324	21.28
Once	3150	28.85
Rarely	1708	15.64
Total	10920	100.00
Approximate time to use internet		
> 3hours.	504	4.63
2hours. – 3hours.	602	5.51
1hour. – 2hours.	2002	18.33
30 min. – 1hour.	5110	46.79
< = 30 min.	2702	24.74
Total	10920	100.00
Place of browsing internet		
Home	2464	22.56
Cyber cafes	6832	62.56
Friends place	3206	29.36
Institutions	4508	41.28
Other place	350	3.21

Ever Used Internet

As large as 92.86% have used Internet while 7.14% have not ever used it. Since a vast majority of the respondents have effectively utilized Internet at least once, one could be optimistic about the potential for its growth in the future educational efforts (Table 4). Internet could be accessed at ones' convenient times.

Frequency of Using Internet

It is seen that the usage frequency is widely dispersed, with majority of the users browsing not less than twice a week. Internet usage is unlike that of others. A user is not an owner and is merely allowed access on payment of charges. The frequency of usage could have been influenced most by the interest levels of the respondents followed by the costs involved in using them. 19.36% use Internet everyday in a week, 14.87% use it 4 – 5 days in a week, 21.28% use it 2 – 3 days in a week, 28.85% use it once in a week and 15.64% use Internet rarely as presented in Table 4.

Approximate Time Spent to Use Internet

In using the internet, searching takes a sizeable time. Table 4 reveals that 24.74% use internet approximately for about less than 30 min., while 46.79% use it approximately for about 30 min. – 1hour, 18.33% use it approximately for about 1 – 2 hours, 5.51% use it approximately for about 2 – 3 hours, and 4.63% use it approximately for more than 3hours. The emerging data shows that majority of the respondents have used the net for the optimal time. As the browsing pattern shows that just a small segment comprising of 24% are using it less than 30 minutes, the statistical mode of browsing time is the duration of 31 to 60 minutes. A summary of the analysis on indicators of browsing standards would be that the quantum of browsing within the initial decades of browsing in India could be described as in the right direction. However, the adequacy and quality of browsing would depend on the individual and the connectivity available.

Place of Accessing Internet

Institutional provision of browsing facilities is still in a rudimentary stage. An ideal situation for education related browsing would be before or after the class room sessions, in which case the place of browsing is a significant influence in the benefits of browsing. 22.56% stated that they browse at home as depicted in Table 4. 62.56% stated that they browse at cyber cafes, 29.36% stated they browse at friends places, 41.28% stated that they browse at institutions and 3.21% stated that they browse at other than those places mentioned above.

Purpose of Using Internet

Browsing could be done for different purposes and education is one of them. Table 5 presents the major purposes of usage of the Internet among the student population in Tamilnadu to explain how much share of time online is allocated for education by the respondents.

Table 5: Students according to purpose of using internet

Purpose – internet		Frequency	Percentage
Send mail	No answer	924	8.46
	Rarely	770	7.05
	Sometime	6524	59.74
	Always	2702	24.74
Seek information about education	Rarely	1554	14.23
	Sometime	2996	27.44
	Always	4578	41.92
	No answer	1792	16.41
Gather information about study	Rarely	1162	10.64
	Sometime	3178	29.10
	Always	4368	40.00
	No answer	2212	20.26
Fun & entertainment	Rarely	2142	19.62
	Sometime	3052	27.95
	Always	2996	27.44
	No answer	2730	25.00
Chatting with friends	Rarely	2436	22.34
	Sometime	3038	27.86
	Always	2394	21.95
	No answer	3038	27.86

Majority (59.74%) of browsers answered that they use Internet sometimes to send mail and 24.74% use Internet always to send mail (Table 5). With 16.41% having stated that they don't use internet for the purpose of seeking information about education, 41.92% use it always to seek information about education. While 20.26% stated that they don't use for the purpose of gathering information about study, 40% use it always to gather information about study. Whereas 25% stated that they don't use for the purpose of fun and entertainment, 27.44% use always for fun and entertainment, 27.86% stated that they don't use the internet for the purpose of chatting with friends, while 22.34% use rarely for chatting with friends and 21.95% use it always for chatting with friends.

INTERPRETATIVE ANALYSIS ON INTERNET

Frequency of Using Internet

Through the chi-square test there is significant association between mode of study and frequency of using Internet. It is also similar to the association between area of institution and frequency of using internet. This could be understood in the context of unequal spread of internet in India. Frequency of using internet and medium of instruction were also found to be significantly associated. The predominant language medium of the vast majority of web sites would be

English. Further, it was concluded that there is significant association between gender and frequency of using internet. There is significant relationship between course of study and frequency of using internet. It can be concluded that there is significant association between year of study and frequency of using Internet. As years go by, a student tends to be more independent and moves towards a wide range of experiences according to personality theorists like Chris Argyris.

Approximate Time Spent on Internet

There is significant association between mode of study and approximate time spent to use internet. Also there is significant association between area of institution and approximate time spent to use internet. This result could be viewed in relation to the findings of another study described below in which educational media have been found to benefit the rural students than the urban students. Rural students, tested against rural control groups, benefited more than urban students tested against urban control groups as per the writings of Galda & Searle, (1980). The project evaluators hypothesized that radio lessons were particularly effective in raising the level of knowledge of those who knew least, which in this case were the rural students. The findings of the present study could be understood in the light of the earlier finding.

Similarly there is significant association between medium of instruction and approximate time spent on Internet. Approximate time spent to use Internet and course of study were also significantly associated. The analysis resulted in the conclusion that there is significant association between course of study and approximate time spent to use Internet.

A comparative analysis of all the suggestions provided by respondents through their answers to the open ended questions reveals noticeable commonality among the suggestions to the various media, they are the need felt for greater subject-orientation, enhanced exposure to scientific advancements, examination-centered contents, need for user-interface and contribution and the like. As suggestions, the users have provided opinions that more visual, movable content should be available with the facility of interaction. Educational media, when used in classrooms are likely to produce maximum learning than using them elsewhere. This has been the theme of the variables analyzed.

FINDINGS AND CONCLUSION

While data on viewing time suggested that 65.36% watch TV every day a week, 35.71% of those who listen to radio do it everyday a week, only 19.36% of those using internet, do it everyday a week. Majority of the respondents tend to be frequent listeners of radio and TV, while TV has more regular audience than radio.

A vast majority of respondents possess radio sets as well as TV sets. It was found that 37.06% listen to radio for education, 35.08% watch TV for education, while 40% use internet always to gather information about study. Data indicate that home is the place where most of the respondents have been listening to radio, while vast majorities of 86.64% of the students watch TV at home; only 22.56% stated that they browse at home. 41.28% stated that they browse the internet at institutions, whereas only a negligible segment of students use radio and TV at their institutions. Among the less interactive media, 61.62% answered that they need interactive programs in radio, while only 21.86% have answered that interactive programs are needed for educational purpose on TV programs. Majority 66.90% use Internet, which, in comparison to the fact that very few owned computers, is a significant achievement of media planners in higher education.

SUGGESTIONS

Media planners would benefit by basing their interventions based on the comparative standing of various educational media as understood through the viewing patterns presented with the help of the findings of the study. It is suggested that measures be on to improve the viewership, listening frequency, the priority being on the latter, which is found to be the least frequently used educational media among the students in the area of study. Since majority of the respondents have not used any of the media for educational purposes, the top priority is to be given to strengthen the educational usage of the powerful electronic media. Use of electronic media at educational institutions is found to be low. The usage needs to be enhanced in order to facilitate the increased usage of the media for educational purposes, as indicated by the previous suggestion. Creation of awareness among students about educational media should be taken up on a massive scale with a sense of urgency. Local inputs and interaction should be made a regular feature in the educational radio. Programs and contents in regional and locally understood languages should be featured for more duration and frequency than it is being done at present. In order to achieve localization of educational contents of the electronic media, well-equipped media centers carrying out research and producing need based programs should be created in each University. Campus based electronic media systems could be introduced to produce and present programs of specific educational needs.

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