

Attitude towards Mass Media and its role in promoting Environmental Consciousness: An Empirical Investigation¹

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Introduction

Communication remains the most fundamental element of society and its progress. Therefore, the modern epoch of information technology - also known as the era of 'satellite communication' - necessitates mass media as part and parcel of human existence, experience, and endeavor. Through communication, members of a society share their experiences and knowledge, understand each other, and generate collective wisdom. The ever-expanding network of communication has overcome great distances and formidable boundaries. It has enabled the most essential and basic trait of human communication to thrive and flourish more splendidly. Today, various types of mass media enable people all over the world to interact and learn from each other at a tremendous pace. Communication, with the help of mass media, not only brings people but also communities together, thus contracting the globe into a village (McLuhan, 1964).

The frontier between mass media, individual and cultural transition has been the subject of investigation for many social scholars since the dawn of the 'information and communication age' (Lerner, 1958; Hagen, 1962; Schramm, 1964, Rogers & Shoemaker, 1971; Rogers, 1986; Alahari, 1997; McDonald, 2000). As mass media becomes an integral part of human societies, it, undoubtedly, brings varying

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degrees and natures of unprecedented changes to different societies and individuals in different ways. It is reported that initially, early studies on mass media communication were based upon the assumption that the effects of mass media communication were powerful, direct, and uniform. The insight into the importance of diverse societal needs and priorities, and individual differences in people's attitudes, values and other personality variables, prompted later scholars to cast doubt on its very theoretical foundation. This gave birth to a new theoretical framework considering societal and individual differences pertaining to their perceptions and responses. The new theory assumes that the effects of the media are selective and dependent on the characteristics of a society and individual differences, and is supported by many empirical findings (Peterson & Thurstone, 1933; Cantril, 1940; Schramm, 1979; Kazee, 1981; Lowery & DeFleur, 1988).

Thus, the impact of mass media communication could be perceived at two ends of a spectrum. At one end, the impact would be readily absorbed as a progressive socio-economic feature and the way of life that is characteristic of an individual and a society, without causing perceptible change in the way an individual functions or the way a society is structured. While at the other end, the introduction of an ostensibly innocuous technology would gradually result in cumulative imperceptible change to the unique way of life perfectly adapted and flourishing prior to the advent of mass media. The outcome of such a change would cause a major shift in the individual's attitude and outlook towards the social fabric and cultural setting that might underpin the essential values and convictions deeply held by the individuals and society at large. Bhutan, in particular, has a popularly idiosyncratic developmental approach with the ultimate aim to realize and maximize happiness for every citizen. The realization of such a big aim in a small country hinges comprehensively on four potential nuts and bolts of Gross National Happiness (GNH). Two of these are the preservation of Bhutanese culture and a sustainable environment. The importance of a sustainable environment

for attaining happiness is specifically reflected in government policy. It is implicit in this widely-endorsed approach that in the fruitful harmony that exists between nature and culture is rooted the eco-friendly approach to conservation of Bhutan's largely un-spoilt environment.

On the other hand, already the country's initiative to allow more pervasive force of media like cable television and the Internet, has been viewed skeptically by many from both inside and outside alike. The country, being a late starter in development, is fully aware of the undesirable impacts that the media have had on much larger societies. Furthermore, Bhutan, as a society with a strong oral tradition, instead of literary, is far more vulnerable to the negative impacts of media (Kuensel, June 1999).

Till now, no direct studies have attempted to assess the relationship between mass media and environmental awareness and certainly no such attempt has been made in the context of Bhutan. Perhaps, there is an embedded understanding of the possible role of mass media in general to function as a medium of national development. Nevertheless, commercialization of various forms of mass media might conflict with the priority of interest and may fail to fulfill the original noble goal of the mass media. It assumes even greater interest, given the circumstances, where cable television and the Internet were ushered into the country in 1999, when its national medium and institutional capability concerning the legal and social acceptance of mass media were still in their embryonic stages.

A decade later, as fluid as the culture is, the pervasive force of mass media is likely to expedite its evolution. Has the era of modern mass media introduced significant changes? What is the impact of mass media on people's attitudes? What is its role in affecting attitudinal transition towards environmentalism? How could media play a fruitful role in promoting environmental awareness? Such questions become pertinent since, not only does mass media serve as a medium for socio-economic and psychological development, but it can also play a vital role in promoting cultural and environmental integrity.

Environmental Education, Mass Media and Development: Concepts, Concerns and Opportunity

Critical to the realization of any novel idea of relevance and practical translation is the matter of creating and raising its awareness. In the domain of environmental issues, environmental education plays a key role in sensitizing people of the need and significance of any such programs, which are carried out to address environmental problems confronting them.

Environmental education increases public consciousness and knowledge of environmental issues and challenges. People profit, through environmental education, by gaining an understanding of how their individual actions affect the environment, acquiring skills that they can use to evaluate various sides of issues, and becoming better equipped to make informed decisions. Environmental education also gives people a deeper understanding of the environment, inspiring them to take personal responsibility for its conservation and restoration (Mukharji, 2004).

Environmental education also helps bring forth the traditional solution to address the modern environmental crisis by discovering the time-honored connection between nature and culture. This is particularly true in a traditional society where environmental consciousness is the upshot of a culture of associating various aspects of environment to a sacred space. The profundity of such a link, on which people's environmental consciousness is established, stirs tremendous awe and reverence for the environment and hence its preservation.

Mass media is an unfamiliar expression of a familiar medium of communication that was dominant in Bhutan, particularly in the form of radio and print media prior to the advent of more invasive forms of media such as TV and the internet. Even though, mass media has been present in the country for nearly five decades, it is not until the turn of new millennium, with increased accessibility to other pervasive forms of media, that it is able to gain fresh momentum and significance. So, the concept of mass media in the country is

old as it is new. Janowitz (1969) describes mass communications as comprising specialized institutions employing technological devices such as press, radio, film, etc., to circulate important subjects to large, diverse, and widely distributed audiences.

According to V. K. Narayana Menon (1981) (cited by S.P. Alahari, 1997), the notion of individuality is lost in the word 'mass' and various forms of media such as radio, television, newspaper, etc., report events intended for such an enormous number of listeners, viewers, and readers. The advances in telecommunication networks have revolutionized the function of mass media to serve wider coverage at a faster pace worldwide. This has provided an enabling environment for media in the new era to achieve its ultimate aim of reaching to a very large audience in Bhutan.

Mass communication, therefore, plays a crucial role in connecting the world to an individual, and provides opportunity for the individual to communicate with a wider audience. However, the downside of mass media communication, as national and international media ownership is more likely to be influenced by a few, is in its difficulty to maintain neutrality to what is being shared through different modes of public communications (McDonald, 2004; Ura, 2006). A classic example of the case in point can be illustrated by referring to often one-sided picture presented by mainstream western media of events unfolding in Balkan in 1999 and of the American war on Iraq (Kuensel, May, 1999a; BBC news, 2005).

It is reported by S.P. Alahari (1997), however, that one of the greatest concerns of many communication scholars is not so much the effect of mass media on people in general, but the potential function of mass media for bringing desirable social change and for achieving the developmental goals of nations. Several scholars set the stage on the dynamics of development and the role of mass media in achieving developmental goals.

Daniel Lerner (1958) emphasized the relationship between communication, urbanization, and modernization by considering that urbanization is an important step towards

enhancing media exposure, which in turn, increases political and economic participation. Everett F. Hagen (1962) also emphasizes the need for modernization as a prerequisite for development by expanding the mass media because he believed that the traditional values, as opposed to innovative personalities of more industrialized nations, are a setback to progress in the third world. This has, perhaps, inspired UNESCO in the sixties to set apart the underdeveloped countries on the basis of not fulfilling certain minimum standards for media structure and thereby emphasizing the need for expansion of media facilities (cited by J.S.Yadava, 1994).

S.S. Lowery and M.L. De Fleur (1988) argue that development, the process of modernization, and the growth of mass communication are closely linked. According to them, modernization is needed to trigger the culture of consumerism, which can be effectively achieved by the expansion of mass media communication. This is accompanied by a bandwagon of cultural change, creating a major shift from traditional values to modern ways of life.

Others, like Everett M. Rogers (1976), have, from very early on, understood the essence of wholesome development, taking into consideration both material and social advancement. He also highlights, the fact that the goal of development can be county-specific, depending on the priority of needs. However, it is clear that the Rostowin economic theories and the *laissez-faire* concept of market economy have tremendously influenced development and communication thinking in most developing countries (Yadava, 1994).

The problem of mass media in facilitating unrestricted growth in developing countries has been, therefore, due to direct export of western models and theoretical formulations in the developing countries (Ball-Rokeach and Canter, 1986). However, there is no question that growth is not necessarily a bad thing. It is a reality and an important feature on which human existence depends. The issue is not a discrete argument of growth or no growth, but rather the redefinition of the term growth in more sustainable terms. Such a

concept of growth demands a far-sighted vision beyond the typical planning period. In fact, sustainability calls for a comprehension of tomorrow that spans several generations into the future (Lein, 2003). This new paradigm of development, as opposed to the conventional model of growth, is now being increasingly appreciated at all levels in both developed and underdeveloped countries. The role of mass media has been redefined to place a new emphasis on development communication where media can be used to provide social and educational opportunities, such as family planning or environmental campaigns (Prasad, 1999). For making best use of communication for development, it is necessary to first clearly define the development objectives, and then accordingly set explicit communication objectives, and specific communication tasks and inputs to achieve the development objectives in a most cost-effective manner (Yadava, 1994).

In the light of the new paradigm of development, the integrated environmental planning concept is a compatible approach towards conservation which views the environment as spiritually renewing- a notion that characterizes the environment as an entity possessing ethereal qualities that are worthy of preserving simply because they exist (Lein, 2003). The essence of such an approach is ingrained in Bhutanese cultural integrity that permeates its consciousness and reflected in the country's sound environmental policy (BAP, 2002; Dey, 2002). Considered the 'the champion of the earth' for its sustainable environmental approach, guided by the profound wisdom of the 4th Druk Gyalpo, Bhutan has tremendous scope to maintain its environmental integrity. The preservation of the country's natural environment is not only because of its connectedness with social and cultural values but is also due to strong economic and ecological reasons that call for the environmental intactness (BAP, 2002).

The mass media may promise to enhance opportunities to keep abreast of modern events and experiences happening globally. On the contrary, the importance of preserving traditional values in the developing world is as crucial for

existence as modernizing ways of life in the developed world. Bhutan is probably the last nation to allow the introduction of mass media, particularly television and the internet. With more than thirty foreign television channels and with little restriction in viewing, the unquenchable grip of the media has almost completely seized the nation overnight. Cable television, with unrestricted exposure to sensational entertainment and biased information could orient people's intent and action (Ura, 2006). Numerous studies conducted suggest a significant effect of television on an individuals' attitude and behavioural traits (Williams, 1986; Doordarsha Study, 1994; Gupta & Nagar, 1994). McDonald highlighted the danger of television in Bhutan and the damage it could do to the nation's values and ideals. He emphasized that the introduction of captivating media like cable television is equivalent to upholding the culture of consumerism, which is counter-productive in a nation striving towards maximizing GNH and not GNP.

It is clear that media has had a dramatic effect on society at large by modernizing peoples' traditional values and attitudes. One of the challenges in the realm of environmental sustainability is to keep traditional attitudes and values alive by strengthening the link between environmental conservation and the conservation of cultural heritage (Bhutan: 2020). The media, on the contrary, could prove to be fatal to environmental consciousness by successfully obliterating the harmonious link that exists between nature and culture.

It is plain to see that mass media in any society cannot be prohibited, as the access to information has become an inalienable right of the individual. However, it can be noted that media is not necessarily an evil. As media brings many positive results in the industrialized world, so it could be tailor-made to serve Bhutan's need. Many advocate that, while media can be adapted to play a positive role, it has not been exploited to the fullest extent in developing countries. It is crucial to exercise appropriate discretion in the use of mass media, so that mass media resurrects and supports, and does not destroy culture and values undergoing rapid

modernization.

The paradoxical impacts of mass media on society and its people is a deep concern of His Majesty the King himself, who formally introduced television and the Internet in the nation, which is reflected in his public address during the 'country's silver jubilee celebration:

The introduction of TV and Internet in Bhutan today is a reflection of the level of progress that we have achieved. I would like to remind our youth that television and Internet provide a whole range of possibilities, which can be both beneficial as well as negative for the individual and the society. I trust that you will exercise your good sense and judgment in using the Internet and television.

- *Kuensel*, June, 1999 (b)

Environmental education is one of the tools to help meet the aims of conservation. The media could take up a crucial role by providing technical information about relevant environmental problems and possibilities, and about appropriate innovations (Singhal & Rogers, 1989). In an approach to create conservation education strategy in Nepal, the use of various forms of mass media, such as radio, television, newsletters, etc., has been highly recommended to reach out to the masses effectively in terms of cost, time and efficacy (Bhujju, 1987).

Reaching out to the public is essential to ensure sustainable development and environmental management, since the livelihood of people and the environment are symbiotically linked. To this end, the need for public awareness and participation has been regarded as imperative (Dey, 2002). Thus, it may be possible to inculcate a predisposition towards environmentalism through mass media by cautiously paving a middle path between preservation of traditional values and resistance to wanton modernization as a result of exposure to pervasive forms of media such as TV.

Problem

While the preceding section discussed the impact of

unrestricted mass media on society, it also highlighted the potential of mass media communication to function in a way that can strengthen the link between traditional values and environmental preservation in the age of modernization. In Bhutan, before the advent of modern mass media, the promotion of environmental awareness was mainly through religious discourse centering on the Buddhist concept of *karma* (cause and effect) or through spiritual belief that the natural environment is a home to sacred deities, and, therefore, the destruction of such sites will disrupt the harmony that exists between the people and the deities. Perhaps, such consciousness and conviction enabled Bhutan to emerge in the 21st century as one of the biological hotspots on the globe for its abundant flora and fauna with comparatively few environmental problems.

In the age of 'info-communication' such an outlook, however, would not last as modernization accelerated by mass media gradually sweeps away spiritual reverence for the natural environment, and favors a consumerist attitude towards natural resources. The recent entry of cable TV and the internet in almost every Bhutanese house would further expedite the process of modernization with greater efficiency. Media imperialism, undoubtedly, is deleterious to the rich social and cultural foundation of Bhutanese society.

Today, as environmental concerns escalate with the ever-increasing rise in population, the need for turning the force (foes) of media to positive forum (friends) for environmental education is imperative. There is a proportional need to explore ways to heighten and deepen environmental awareness to be able to tackle the problem successfully. Particularly for Bhutan at the juncture of historic socio-political change, the rise of media could be employed as a development communication to play a crucial role to this end.

This calls for micro-level evidence on the role of media in environmental education in Bhutan, since various changes at the macro level could be a reflection of the changes at the individual level. It is possible that some of the changes, as a result of exposure to environmental education, might pervade

the larger structure of society and bring about desirable change. The research questions to be addressed here are: Has varying levels of exposure to media had an impact on individuals' environmental awareness? Would media be able to play a crucial role in environmental education?

However, the above questions need to be considered with the following preliminary information such as: What is the attitude of people towards media? To what extent has media influenced individuals' decisions? What is the role of various media in environmental education?

Against the above backdrop, the present study seeks to answer the above, and several other related, issues through empirical investigation. Sai Prasa Alahari (1996) has taken a similar approach through studying the relationship between modernism, alienation, and the behaviour of people towards media. The current study looks at the attitude of people towards media and its role, potential, and perception in environmental education.

Methods

The present study was based on a primary survey of the respondents in terms of appraising their attitude towards mass media and its relation to the level of environmental awareness. A field survey was conducted with pre-designed questionnaires. The survey was undertaken on individuals living in and around Kanglung. Out of 251 respondents drawn on the basis of convenient random sampling, only 184 samples were used. The remaining was left out simply due to ambiguity in the information provided.

The study considered only the role of print media, that is, *Kuensel* and electronic media such as the Bhutan Broadcasting Service (BBS) - radio and television, which were assumed to have greater impact than other media forms, such as films, magazines, newsletter, etc. The programs broadcasted by electronic media and the contents of print media were reviewed randomly to assess the coverage on environmental themes. Based on the programs and the contents, relevant questions were designed to test the

awareness of respondents on environmental issues at national and international levels.

The main aims of the study were as follows:

- To assess the respondents' attitude towards mass media;
- To assess the influence of media on the respondent's decision-making;
- To assess the most important functions of the media;
- To investigate the perceptual and potential roles of existing media in promoting environmental education;
- To examine the relation between the perceptual role of media in environmental education and the respondents' level of environmental awareness;
- To discern the extent to which exposure to various media contributed to the respondents' environmental awareness;
- To investigate whether all the above issues differed between males and females.

In the present study, *the Attitude towards media* refers to the respondent's accessibility to any one form of media in question, such as *Kuensel*, radio, or television. It also included exposure to various kinds of media in terms of average time spent, the most important reason for using each form of media in question, and association between the times spent for various kinds and their educational level.

The Influence of media refers to the effect of various kinds of media on the individual's decision-making process and the association between the time spent for various media and its effect on the individual's decision-making.

The Role of media pertains to the respondent's perception of the media in creating and promoting environmental awareness. It also included the respondent's expectation of the potential role of media in environmental education.

Index of Environmental consciousness is defined as the level of environmental awareness of an individual.

Different aspects of mass media attitude pertaining to each of the three forms of media were investigated further. This has been done to investigate the patterns of mass media consumption among the male and the female sections of the population, and among the different educational groups as well. Firstly, the accessibility to various mass media was measured differently for each media. For example, the way in which the respondents obtain print media such as *Kunensel*, could be as follows: the reader might have a subscription or buy the paper on a daily basis or obtain it from the reading room/library/office. For radio and television, the accessibility was assessed in the form of ownership of one or more than one set, or on sharing with friends or families. The respondent's accessibility was separately assessed for the male and the female population.

Secondly, the respondent's exposure to each media was assessed among males and females. This was done using the data collected for the average number of hours per week that the respondent engages in reading *Kuensel*, or listening to BBS-radio, or viewing TV. An attempt was also made to find out their engagement in viewing the national channel, BBS-TV.

Thirdly, the respondents could be using various media for different reasons. Media could be used as a source of information, education, and entertainment, or any other reason. Various reasons for using each medium by each group of the male and the female respondents were assessed to find out the most important function served by the media.

Fourthly, the effect of various media used by the respondents on their decision-making was examined for the whole sample. Which gender group is most likely to be affected by the media in their decision-making process was also examined. This was measured on a five-point scale: one, being not affected at all; and five, being affected all the time. The association between the influence of various media on the respondent's decision-making process and their level of exposure to each medium was also investigated.

Then, various issues pertaining to the role of each type of mass media for environmental education were examined for

the whole sample. The role of various media for the sample of males and females was observed. The role of media includes two aspects: the perceptual role and the potential role that the media plays in enhancing environmental awareness. First of all, the respondent's rating of the role of various media in promoting environment awareness constituted the perceptual role played by each media. This was measured on a five-point scale: the lowest being negligible and the highest being excellent in terms of role in promoting environmental education. The actual user of that particular medium can rate this only after taking into account the content and the coverage of each media with regard to the issue.

Second of all, the potential role of the media was defined as the people's expectation of the possible role that the media could play in promoting environmental consciousness by extending coverage on environmental issues. This attempted to gauge the respondents' expectation of the potential role that the media could play in environmental education. The information is crucial, given the growing accessibility and the increased exposure to various forms of media in the country. Respondents' expectation of each media was assessed on a three-point scale: the highest being a definite expectation of the role of the medium and the lowest being ignorant of the potential role of the media in creating and promoting environmental awareness. Since this pertained to the respondents' opinion on the role that the media could play in environmental awareness, all the respondents, irrespective of actually having used the media or not, can mark the scale for the particular media. The results were analyzed separately according to gender.

An index of environmental awareness had been created to test the respondents' awareness on the environmental issues. It was evaluated on the basis of an environmental awareness scale. The scale consisted of a set of questions based on the environmental theme both at the national and international level. Some of the issues discussed in the questions would have appeared at one time or the other in the entire medium of the mass media considered for the present study (such as *Kuensel*, BBS-radio and BBS-TV

coverage). There was a set of ten questions which were designed to test the individual's level of knowledge on environmental issues. The scale was formulated on the principles of Bloom's Taxonomy for categorizing level of abstraction of questions that commonly occur in educational settings (Bloom, 1956). The scale, therefore, attempt to include questions to test individuals' environmental awareness at various levels such as recall, application, comprehension, analysis, synthesis, and evaluation.

The average score of the respondents was determined to discover the level of their environmental consciousness. An attempt was made to discover if there is an association between the role of media in promoting environmental education as perceived by the respondents and their level of environmental consciousness. This was done by correlating the individuals' scores on the index of environmental awareness with their rating of the perceptual role of the media in environmental education.

An attempt was also made to examine if the respondents' environmental awareness vary with their exposure to various media by comparing their environmental awareness scores with their average hours per week spent on each media.

The data was analyzed and the results determined, using appropriate statistical techniques to meet the aims of the study. The data on attitude towards mass media and the index of environmental awareness were scrutinized with the help of both descriptive and inferential statistics, such as correlation, to assess the relationship between the two (if any). The results are presented in tables and graphs to better demonstrate the findings.

Results and Discussions

The total sample size of the current study consisted of 184 individuals ranging from 16 to 67 years of age. Around 70 percent were males and the rest were females. About 30 percent of the sample was from 16 to 20 years of age and 45 percent were from 21 to 25, while 15 percent fall under the age range of 28 to 30 years. The respondents were from

different educational backgrounds ranging from illiterate to primary school and from high school to degree and professional. Around 70 percent of the total respondents have either completed their degree or were undergoing one, and as few as 17 percent had either dropped out or were still doing their high school. Very few had either studied up to primary school (3%) or had no schooling at all (4%). Therefore, the majorities of the sample were made up of young people between the ages of 16 to 25 and were mostly undergraduates.

It was reported that the assumption of the impact of media to be direct, powerful, and uniform as postulated by the 'Magic Bullet Theory' is one of the conceptual setbacks to which earlier scholars in the field of media subscribed (Alahari, 1997). Such an assumption did not take into consideration the variations in terms of individual's need, personality, and other variables, as well as in terms of social groups. The apparent drawback with such a theoretical framework led to formulation of 'Selective Influencing Theory', which opines that the impact of media is neither direct, nor uniform, nor powerful but is selective and dependent on the nature and behaviour of people as an individual and as a group (Lowery and DeFleur, 1988). Therefore, to comprehend the effect of media and to explore its engagement in a positive manner requires categorical understanding of the way in which media functions and is consumed in each societal group. The groups may be formed on the basis of demographic characteristics such as age, sex, social status, educational background, etc. The present study sought to focus on the attitude towards media and its role in environmental awareness by a group that constitutes a largely similar age and educational background.

Attitude towards Mass Media

The present study focused only on the role of *Kuensel*, radio, and television on the respondents' attitude, and its relationship with environmental education. The attitude of the respondents towards media pertaining to different

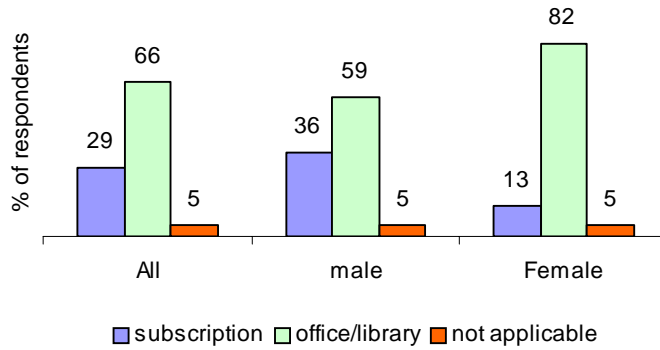
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mediums was described in the following sections:

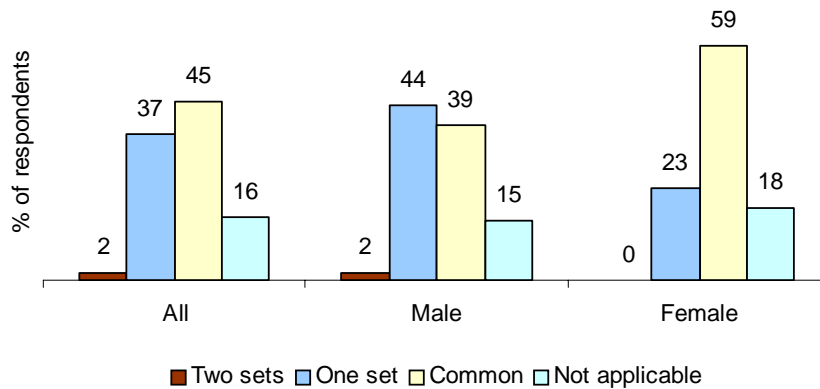
Access to Media

The accessibility to various media considered all the means that the user employed. These were different for different media. Graphs 1, 2 and 3 described various means of accessing *Kuensel*, radio and television respectively.

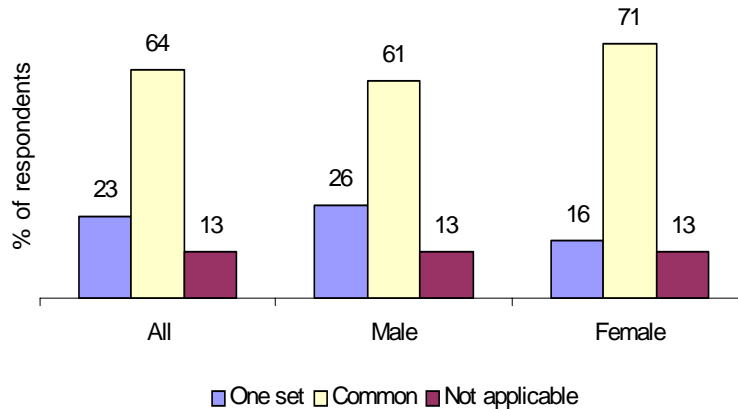
Graph 1: Accessibility to Kuensel



Graph 2: Accessibility to radio



Graph 3: Accessibility to television



It was found that the majority of the respondents (66%) read *Kuensel* either from the library, reading room or at the office. Around twenty nine percent of the respondents were regular subscribers of *Kuensel*. It was claimed that more than 5% of the total population did not read or buy *Kuensel* at all.

A majority of females (82% female: 59% male) were found to read *Kuensel* but did not have a regular subscription. A majority of males (36% male; 12% female), on the other hand, were regular subscribers of *Kuensel*. Equal proportion of the male and female population did not read *Kuensel* at all (5%).

With regard to the access to radio, the majority of respondents shared with their friends or family (45%). About two percent of the total respondents owned more than two sets of transistors; more than thirty seven percent owned only one set; around 16 percent did not own any.

The majority of females (59%) shared a radio set with their families and friends, while, the majority of males (44%) had their own radios. About twenty three percent of females had their own set and thirty nine percent of males shared with their friends and family. While about two percent of males owned two sets of radios, no females owned more than

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one set. More than fifteen percent of males and eighteen percent of females neither owned any radio nor shared with the friends or family. It can be inferred that more of the male respondents have access to radio.

It is reported that the majority (64 %) of the respondents shared a television with their friends and families. More than twenty three percent had their own television set and around thirteen percent did not own one at all.

Similarly, the majority of males (60%) and females (71%) claimed to share a television, while twenty six percent of males and sixteen percent of females had their own set. An equal proportion of males and females (13%) did not own any set at all.

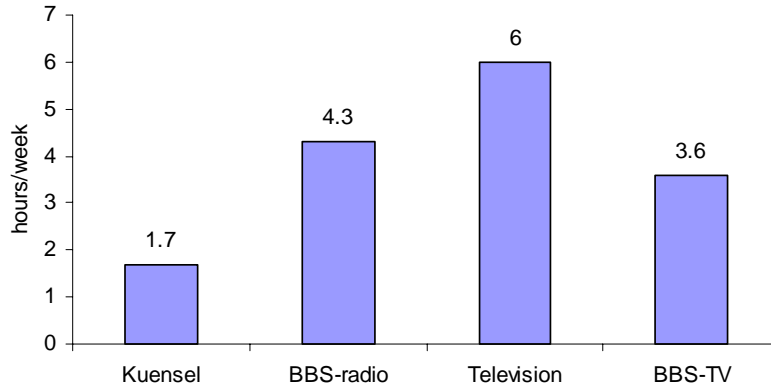
Exposure to Media

An attempt was made to assess the exposure to various media in terms of the average time spent by the respondents per week on each of the media. The time durations were divided into different duration categories for the print media and same time duration categories for the audio and the visual media.

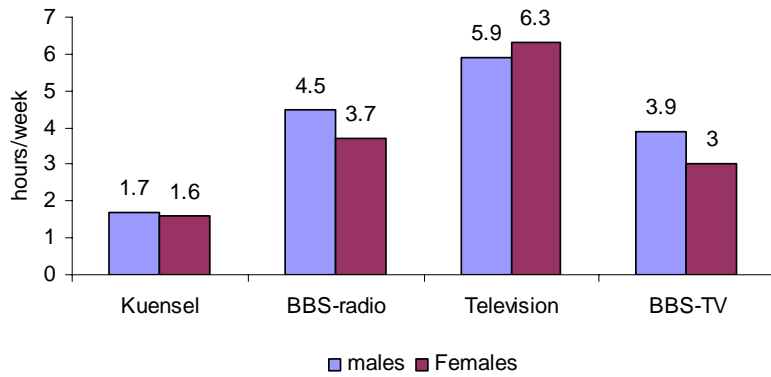
The average number of hours spent by an individual per week on each of the media is calculated and presented in Graphs 4 and 5.

Attitude Towards Mass Media

Graph 4: Average hours per week spent on various media



Graph 5: Average hours per week spent on various media according to gender



It can be seen that respondents on an average per week, spend almost two hours reading *Kuensel*, four hours listening to BBS-radio, three and half hours watching BBS-television and about six hours watching television. So it can be inferred that a comparatively greater number of hours per week were

spent watching television, and since the time spent on television also includes the amount of time spent on BBS-television, it means more hours per week are spent specifically watching BBS-television. Given the fact that there is a circulation of two editions of the *Kuensel* a week, an average person spends less than an hour per week per issue.

The average number of hours spent in a week on various media was further examined according to gender and presented in graph 5. It can be seen that even though an almost equal number of hours per week are spent by both genders reading *Kuensel* and watching television, the males spent more hours in a week listening to BBS-radio and viewing BBS-television. This may be because a greater number of the male respondents have independent access to radio and television than their female counterparts.

The percentage of respondents falling in each time duration category is tabulated to find the differential time exposure across various forms of media. The results are summarized in the following Table 1 and 2, and Graph 6 and 7.

Table 1: Differential exposure to Kuensel by percentage of respondents (number of respondents 184)

Number of hours per week	% of respondents
More than 3 hours	13
2-3 hours	26
1-2 hours	26
Less than 1 hour	30
Never	5
Total	100

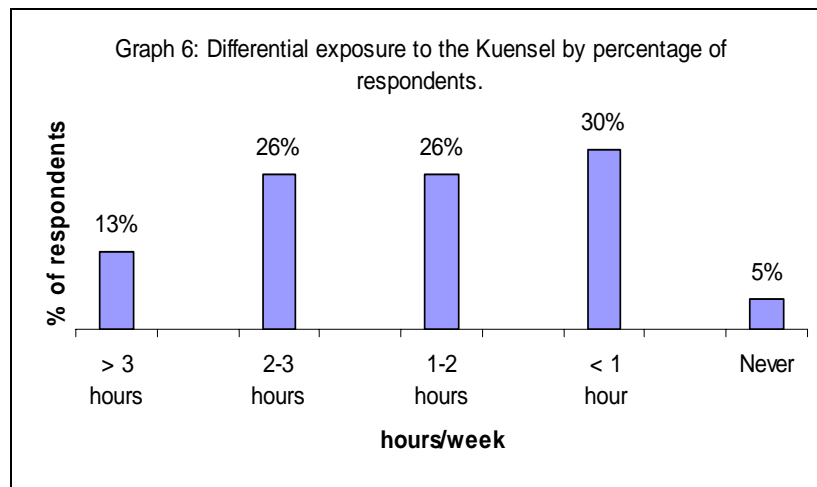
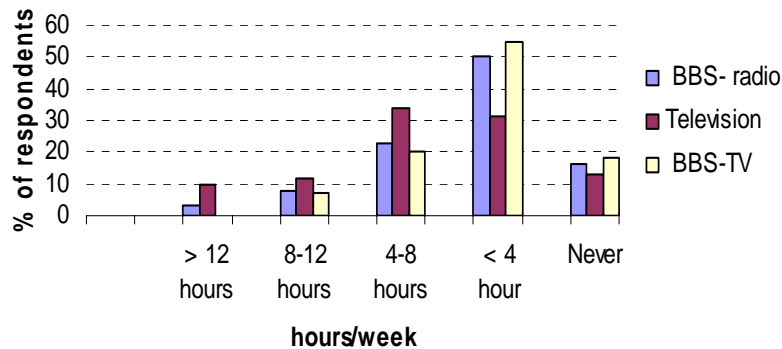


Table 2: Differential exposure to BBS-radio, and watching TV and BBS-TV by percentage of respondents (number of respondents: 184)

Number of hours per week	BBS- radio	Television	BBS-TV
	%	%	%
More than 12 hours	3	10	0
8-12 hours	8	12	7
4-8 hours	23	34	20
Less than 4 hours	50	31	55
Never	16	13	18
Total	100	100	100

Graph 7: Differential exposure to radio and television according to percentage of respondents.



Although more than ninety percent of the respondents get access to *Kuensel* either through regular subscription, or through other sources, some variation existed in the time devoted per week to reading *Kuensel*. The respondents seemed to be equally distributed over different duration categories but relatively fewer respondents (13%) spent more than three hours a week reading *Kuensel*. Around eighty two percent of the respondents, irrespective of gender, spent less than three hours per week reading *Kuensel*. The remainder of the respondents read *Kuensel* for less than an hour per week, and about five percent do not read it at all. This is not surprising given the fact that the majority of the respondents are literate.

Time spent listening to BBS-radio, watching television, and watching BBS-TV was examined using the same point scale. It was reported that the majority of the respondents claimed to watch television at least an hour per week. There was a greater number of respondents who claimed to spend less than eight hours a week listening to BBS-radio and watching BBS-television, while slightly fewer claimed to view other channels for the same duration of time. Comparatively, more respondents claimed to watch television (22%) for more

than eight hours compared with the respondents who either listened to BBS-radio or watched BBS-television for the same duration of time. The number of respondents who tended to spend less than four hours per week watching BBS-television is greater than those who viewed television for the same period of time.

Basically, it can be interpreted that when the respondents have more time (> 4 hours/week), they seemed to watch television, but when they have less time (< 4 hours/week) the respondents either watched BBS-television or listened to BBS-radio. On the whole, the majority of respondents spent more time watching other channels of television while fewer listen to the radio or watch BBS-television. In fact, no respondents claimed to watch BBS-television more than twelve hours a week. This may be attributed to the fact that the broadcasting time for BBS-TV is not more than eight hours. The viewers would be kept well-informed even if they watch BBS-TV for at least four hours. Therefore, comparatively more respondents watching BBS-television less than four hours confirm the statement.

The exposure to each media was further dissected to examine the difference concerning the average time spent by males and females. The results are described in the following section and presented in Tables 3 and 4 and; Graph 8.

Table 3: Differential exposure to the Kuensel according to percentage of gender (number of male: 128; female: 56)

Number of hours per week	Male (%)	Female (%)
More than 3 hours	15	9
2-3 hours	24	31
1-2 hours	27	23
Less than 1 hour	29	32
Never	5	5
Total	100	100

Graph 8: Differential exposure to the Kuensel by percentage of gender.

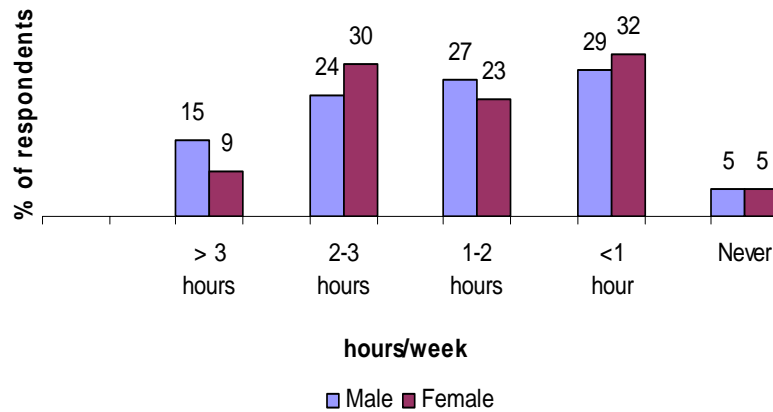


Table 4: Differential exposure to BBS-radio, and watching TV and BBS-TV according to percentage of gender (number of male: 128; female: 56)

Number of hours per week	BBS-radio (%)		Television (%)		BBS-TV (%)	
	Male	Female	Male	Female	Male	Female
More than 12 hours	5	0	11	9	2	0
8-12 hours	8	9	12	12	6	4
4-8 hours	25	18	30	43	22	14
Less than 4 hours	47	55	34	23	51	66
Never	15	18	13	13	19	16
Total	100	100	100	100	100	100

It can be seen from the table that an equal majority (95%) of both male and female respondents read *Kuensel* for at least an hour per week. Not much variation exists in the number of hours engaged per week in reading *Kuensel* between males and females, but relatively more males read *Kuensel* for more than three hours a week compared to females reading it for the same period. The proportion of males and females who read less than three hours a week is more or less equal.

With regard to radio, television, and BBS-television, the

majority of males were reported to use these forms of media for more than eight hours a week, compared to female listeners. In fact, no females listened to radio or view the BBS-television for more than twelve hours a week. Almost an equal proportion of males and females claimed to spend less than eight hours a week listening to radio or viewing television. However, the number of females watching BBS-television for less than eight hours per week is comparatively more than the males viewing it for the same duration of time.

There was not much of a difference in the number of the male and female respondents who never used any forms of the media.

Reasons for Using Various Media

Respondents were asked to state their reasons for using each media. The reasons could fall into the following categories: information, education, and entertainment. Most of the time, any reasons would be relevant to the media in question. So the respondents were asked to indicate the sequence of relevance, if they found more than one of the above reasons to be true for a particular media. This was done to discover the most important reason for using each of the media. Table 5 and 6; and Graph 9 describes the result.

Table 5: Most important reason for using various media (number of respondents: 184)

Reasons	Reading Kuensel	Listening to radio	Viewing Television
	%	%	%
Information	77	63	61
Education	18	13	11
Entertainment	5	12	18

Graph 12: The most important reason for using various media

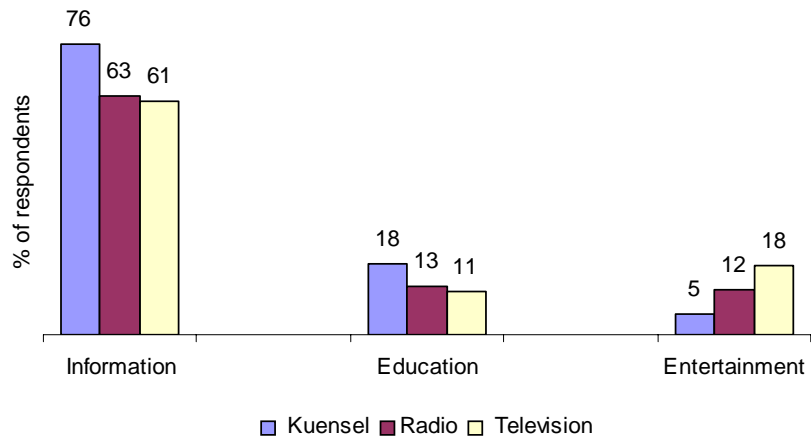


Table 6: Most important reason for using various media according to gender (number of male: 128; female: 56)

Reasons	Kuensel (%)		Radio (%)		Television (%)	
	Male	Female	Male	Female	Male	Female
Information	77	75	65	57	59	64
Education	21	12	14	9	15	3
Entertainment	5	7	9	18	16	23

From the table above, it is clear that the majority of respondents considered information the most important reason for using each forms of the media. In particular, a greater number of respondents tended to read the Kuensel mainly for information. An equally high number of respondents claimed that radio and television were also important sources of information after the Kuensel. Only about eighteen percent of the respondents seemed to agree that the Kuensel is read mainly for educational reasons. However, this is higher when compared to the number of respondents suggesting that radio and television were used mainly for educational purposes. On the other hand, an equal number of readers (18%) believed that television was mainly viewed for entertainment, and less for educational purposes. About twelve percent of the respondents believed that the most important reason for listening to the radio is for entertainment. Education seemed to be regarded as the most important reason by a moderate number of respondents.

Information is clearly indicated to be the most important reason for using the various media in question, but males and females seemed to derive information differently from

different media. Undoubtedly, an equal number of males and females claimed that the most important reason for reading the Kuensel was for information. On the other hand, most of the male respondents reported listening to radio as the primary reason for information, while almost an equal number of female respondents claimed that information was the most important reason for watching television.

Almost twice as many males as females remarked that education, after information, is the most important reason for using the Kuensel, radio and television after information. Conversely, the majority of females seemed to claim that entertainment is the primary reason for using various media. It can be observed that the most important function performed by the media and the primary reason that the media is used is for information, followed by education and entertainment. However, using the different media in question as the most important source of information differed between the male and the female respondents. In general, the male respondents claimed it to be radio and the female respondents claimed it to be television, but when it came to the Kuensel, both genders agreed the newspaper was the most important source of information.

Influence of Media on Decision-making

The influence of the Kuensel, BBS-radio, and BBS-television on the respondents' decision-making process was examined by finding the number of times the respondents take a decision by what they read, see, or hear from various media. The results are summarized in the Table 7 & 8; and in Graph 10.

**Table 7: Influence of media on decision-making process
(Number of respondents: 184)**

	Kuensel	BBS-radio	BBS- Television
Frequency	%	%	%
All the time	2	2	1
Often	7	4	8
Sometimes	55	48	44
Never	36	46	47
Total	100	100	100

Graph 10: Influence of media on decision-making

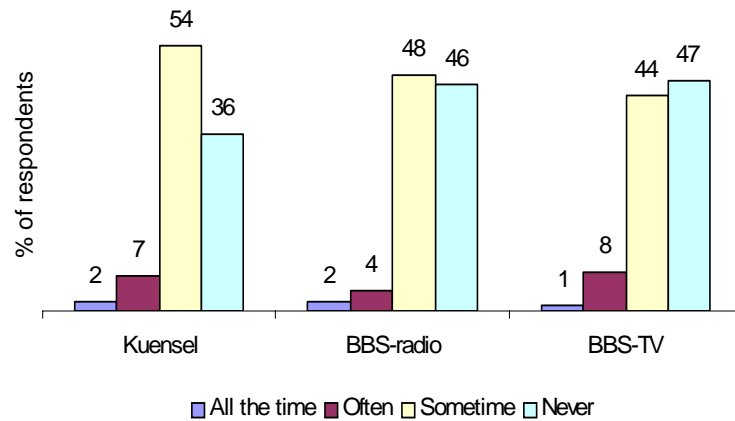


Table 8: Influence of media on decision-making according to gender (number of males: 128; number of females: 56)

Frequency	Kuensel (%)		BBS-Radio (%)		BBS-Television (%)	
	Male	Female	Male	Female	Male	Female
All the time	3	0	2	2	1	0
Often	6	9	6	0	7	11
Sometimes	57	48	50	43	43	46
Never	34	43	52	55	49	43
Total	100	100	100	100	100	100

Tables 7 and 8 revealed that the impact of *Kuensel* on the respondents' decision-making appears to be greater compared to BBS-radio and BBS-television, because only a few respondents were not affected by it in their decision making. The majority of the respondents were affected only sometimes by each of the media. Comparatively, the number of respondents affected only sometimes by *Kuensel* was more than the number of respondents being affected by BBS-radio and BBS-television. The number of respondents not affected at all by BBS-radio and BBS-television is more or less equal to the number affected sometimes by the same. Even though the number of respondents often affected by various media is relatively less, the number of respondents often affected by *Kuensel* and by BBS-television is almost double the number often affected by BBS-radio. This suggests that most of the time, *Kuensel* and BBS-television had influenced a greater number of people.

When the results were examined according to gender, the trend did not differ much, but the number of male and female respondents affected on different occasions appeared to show some variation. The influence of *Kuensel* on the males appeared to be greater as more males (66%) than females (57%) were affected by the same. The same was true for the number of males (58%) and females (45%) listening to BBS-radio. Conversely, the influence of BBS-television on females appeared to be more, as greater number of females (57%) than males (51%) seemed to be affected by BBS-television.

While there were few males who claim to be affected all the time by *Kuensel* and BBS- television, no females claim to be affected all the time by the same. *Kuensel* and BBS-television often appear to affect more females than males, but no females claimed to be affected often by BBS-radio. Although the majority of respondents were reported to be affected only sometimes, the influence of *Kuensel* and BBS-radio at times is more on the males than on the females. More or less equal number of males and females were only sometimes affected by BBS-television in their decision-making process.

The relationship between the average time per week exposed to each media and its influence on the respondents' decision making was examined. The results suggested a positive correlation between the influence of *Kuensel* ($r = 0.35$), BBS-radio ($r = 0.42$), television ($r = 0.30$), and BBS-television ($r = 0.28$) with the average time per week the respondents spent on each. This tended to suggest that the influence of media on individuals' decision-making is more with more exposure to each forms of media. However, the correlation value is not very significant.

This finding supports the characteristics of print and audio media described by Menon V.K. Narayana, who discerns the effect of print media and audio-visual media by stating that when an event is reported, people who listen to radio and others who view it on television learn of the event at almost the same time, while those who read of the event learn of it the following day. So the impact of radio or

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television reporting is almost instantaneous on a large group of audiences. This cannot be more accurate in Bhutan's situation, where it used to take almost three days to get the only print media, *Kuensel*, and more than a week to get BBS-telecast for the reader and viewers in the eastern part of Bhutan. He further argues that television and radio reporting creates a feeling of a shared experience and a sense of participation in the event being reported. A newspaper, on the other hand, is limited to one reader at a time who is segregated for the few moments from the rest, and every reader reacts singularly to the reported item causing time delay in their reaction.

Role of Media on Environmental Education

This section was an attempt to reveal the perception of the respondents and their expectations of each media to play a role in generating environmental awareness. The results were presented in two sections: 1) the perceptual role, and 2) the potential role of media in enhancing environmental awareness. Firstly, the individual respondents were asked to give the rating of the role of each media in promoting environmental awareness. This constituted the perceptual role of the media in environmental education. Initially, it was evaluated on a five-point scale but the responses were later divided into three categories for convenient comparison.

Secondly, an attempt was made to find the respondents' expectation of each form of the media in creating and promoting environmental awareness. This was done to find out the extent to which media could play a role in enhancing environmental education. Tables 9 and 10, and Graph 11 summarize the observations.

Table 9: Perceptual role of media in environmental awareness (number of respondent: 184)

	High	Medium	Low	Total
	%	%	%	%
Kuensel	70	20	10	100
Radio-BBS	66	14	20	100
Television-BBS	71	10	19	100

Graph 11: Perceptual role of media in environmental awareness

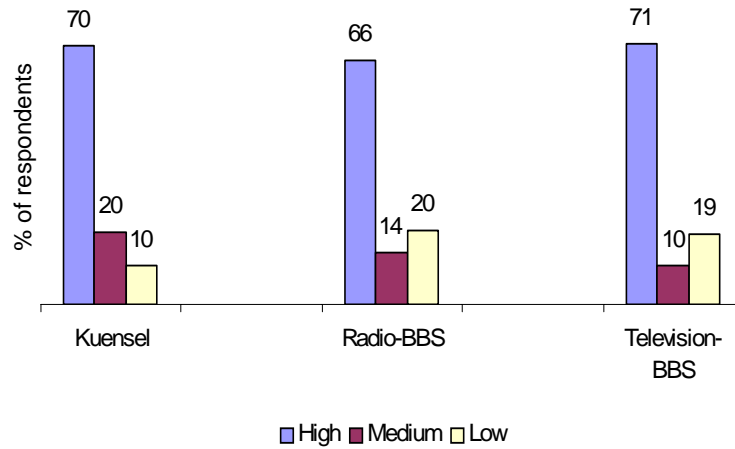


Table 10: Perceptual role of media on environmental awareness according to gender (number of males: 128; females: 56)

Media	High (%)		Medium (%)		Low (%)	
	Male	Female	Male	Female	Male	Female
Kuensel	67	77	21	16	12	7
BBS-radio	64	70	16	11	20	20
BBS-television	67	79	12	7	21	14

Perceptual Role of Media

It is clear from the Table 9 that the majority of readers claimed that the role of *Kuensel*, BBS-radio, and BBS-television in promoting environmental awareness is very good. A moderate number of readers (20%) claimed that *Kuensel* played an average role in promoting environmental awareness, while as many as half the readers (10%) rated *Kuensel* very low for this. Conversely, most the remaining respondents believed that the role of BBS-radio and BBS-television for raising environmental awareness is below average, compared to the respondents who claimed that it is not.

Examination of the perceptual role of media in environmental awareness according to gender revealed that the majority of female respondents, in comparison to the male respondents, regarded *Kuensel*, BBS-radio and BBS-television as playing very good roles in environmental awareness. Interestingly, the majority of males, when compared to females, rated the role of each media to be moderate in contributing to environmental awareness. A similar trend existed when considering the role of each media

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as low concerning environmental awareness with the exception of BBS-radio, where the proportion of male and female respondents is exactly equal.

Potential Role of Media

The results of the respondents' expectation of the media in raising environmental awareness were categorized into three groups. The results are presented in the following tables and graphs.

Table 11: Potential role of media in environmental education (number of respondents: 184)

Reasons	High	Medium	Low	Total
	%	%	%	%
Kuensel	46	48	6	100
Radio	51	43	6	100
Television	55	39	6	100

Graph 12: Potential role of media in environmental education

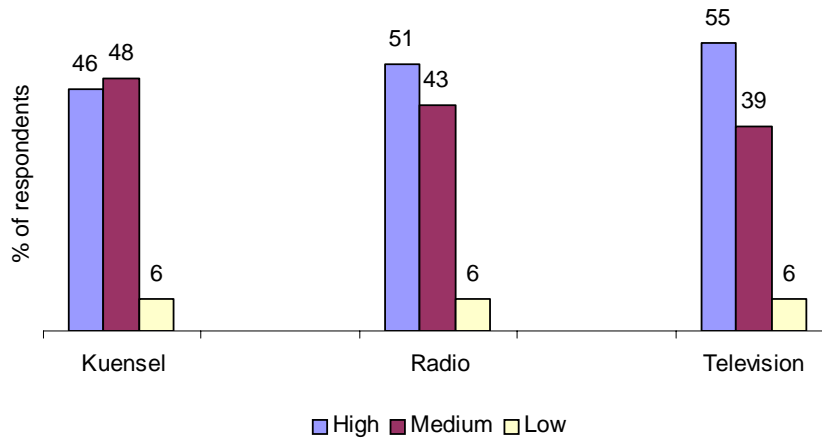


Table 12: Potential role of media in environmental education (number of males: 128; females: 56)

	High (%)		Medium (%)		Low (%)	
	Male	Female	Male	Female	Male	Female
Kuensel	53	30	42	62	5	7
Radio-BBS	55	43	40	50	7	7
Television-BBS	59	46	35	48	6	5

The majority of respondents answered that BBS-radio and BBS-television could play a very significant role in environmental education, while an almost equal number of respondents claimed that *Kuensel* could play a moderate to

high role for the same. It was also reported that fewer respondents did not have high expectations from each media to play a significant role in environmental education.

Although the majority of females perceived the role of various media in environmental awareness as high and the majority of males perceived the role of various media in environmental awareness to be moderate (Table 11), their expectation of the potential role of each of these media is just the reverse. Interestingly, the majority of the male respondents, in comparison to the females, were reported to regard the potential role of each media in environmental education as very high. While the majority of females, compared to males, claimed to believe that each of the media could play only an average or moderate role in environmental education, only a small proportion of the male and female respondents claimed that the media could not play a significant role in promoting environmental awareness.

Index of Environmental Consciousness

The level of environmental consciousness or awareness was assessed using a series of questions on environmental themes, evaluated out of ten. The respondents were divided into three categories:

- High environmental consciousness, including respondents scoring eight and above;
- Medium environmental consciousness, including respondents scoring between five to eight; and
- Low environmental consciousness, including those who scored below five.

The results are presented in the following tables and graphs.

Total 13: Percentage of respondents with varying levels of environmental awareness (number of respondents: 184; number of males: 126; and number of females: 56)

	High	Medium	Low	Total
	%	%	%	%
All	9	59	32	100
Male	12	58	30	100
Female	2	64	34	100

Table 13 and Graph 13 indicate that the majority of the respondents had average environmental awareness, and as few as nine percent of the total respondents were highly environmentally conscious. A greater number of the males (12%) are more environmentally conscious than females (2%), but the majority of the females (98%) showed a low to moderate level of environmental awareness, compared to the males (88%) with the same level of environmental awareness. Almost an equal proportion of males and females scored low on the environmental awareness index. This means that more males were highly conscious of the environment, but a majority of the females are moderately conscious. It can also be noted that one-third of male and female respondents are equally ignorant about the environment.

The average score of the respondents on environmental awareness was 5.3 and; those of males and females were 5.5 and 4.8, respectively. The score of the male respondents was slightly above average. The males on average are more environmentally conscious than their female counterparts.

The association between the respondents' perception of

the role of each media and their environmental awareness index was examined by correlation. It was observed that there is a positive correlation, but to a very low degree. This means that more environmentally conscious respondents seemed to perceive that the role of media in environmental awareness is positive. However, the correlation is not very significant. The correlation values for *Kuensel*, BBS-radio, and BBS-television are 0.3, 0.09, and 0.28 respectively. The picture is not very different when examined according to gender (with little variation). Both males and females showed weak positive correlation between their rating on the role of media in environmental awareness and their index of environmental awareness. The females ($r = 0.41$) seemed to show slightly higher degree of correlation as compared to the males ($r = 0.27$) in terms of their rating of the role of *Kuensel* and their environmental awareness. Even in the case of BBS-radio, females appeared to show a higher degree of correlation ($r = 0.22$), compared to males ($r = 0.04$). With regard to BBS-television, males seemed to show a slightly higher correlation with their environmental awareness ($r = 0.31$) than females ($r = 0.24$). This seems to suggest that a larger number of environmentally conscious female respondents believed that *Kuensel* and BBS-radio had, to some extent, enhanced their environmental consciousness. While a larger number of environmentally conscious males claimed that BBS-television has some role in the promotion of their environmental consciousness.

An attempt was made to discern the extent to which media exposure could play a role in influencing the respondent's environmental awareness. The respondents were divided into three categories depending on the number of hours they spent on each media:

High Exposure: including those respondents who spent more than two hours a week reading *Kuensel* and those who spend more than eight hours a week listening to BBS-radio and viewing television and BBS-television.

Medium Exposure: including those respondents who spend one to two hours per week reading *Kuensel* and those

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who spent four to eight hours per week listening to BBS-radio and viewing television and BBS-television.

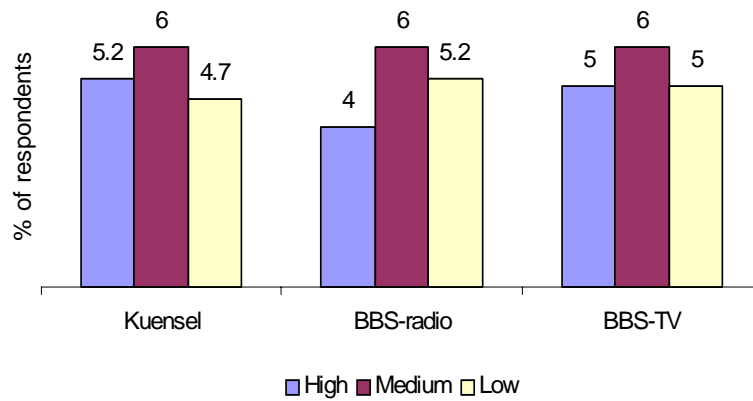
Low Exposure: those who spend less than one hour per week reading *Kuensel*, and those who spend less than four hours listening to BBS-radio and viewing television and BBS-television.

The average scores of the respondents' environmental awareness index and the differential exposure across each media were examined. The results are presented in the following section:

Table 14: Association between the average score on environmental awareness and the differential exposure to each media

	High	Medium	Low
Kuensel	5.2	6	4.7
BBS-radio	4	6	5.2
BBS-TV	5	6	5

Graph 15: Association between the average score on environmental awareness and the differential exposure to media



It can be seen from the table that the respondents with moderate exposure to *Kuensel*, BBS-radio, and BBS-television appeared to have high scores on the environmental awareness index. Those who are moderately exposed to various media are, perhaps, able to select and choose only some programs that were relevant to their interest. It can also be seen from the table that the respondents who spend more time reading *Kuensel* had scored high and those who spent less time on reading had scored low on the environmental awareness index. This shows that, in general, moderate exposure to each of the media (i.e. 1-2 hours per week for *Kuensel* and 4-8 hours per week for radio and television) had positive effect on raising environmental awareness. It can be inferred that the respondents who spend more than two hours per week reading *Kuensel* are certainly more environmental aware than those who spend less than one hour per week on *Kuensel*. However, those who have high exposure (more than 8 hours per week) to BBS-radio have scored less (4) than those who spend less than four hours per week listening to BBS-radio (5.2) on the

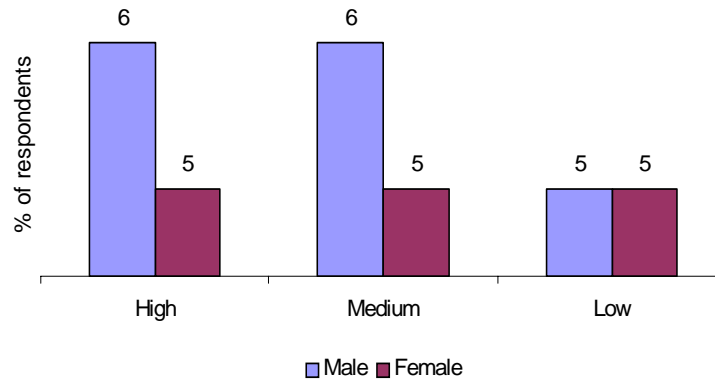
average environmental index. This seems to suggest that the time spent on media and the respondents' environmental awareness index was indirectly related, because the more time a listener spent listening to radio, the less effective the radio becomes in promoting environmental awareness. This could be either because the environmental coverage on the radio program is overwhelmed by coverage of other issues, or, as the respondents spend more time on radio, they are not likely to show any discrimination with regard to the programs they view. Certainly, some degree of exposure to a particular content may lead to the difference in the respondents' environmental awareness. Moreover, exposure beyond a limit may become ineffective. These findings need to be explored further

The environmental awareness index score across the differential exposure to BBS-television did not show any variation except for the moderately exposed group. The group of respondents who watched BBS-television for more or less hours per week scored identically on the environmental awareness index. It can be inferred that the role of BBS-television on environmental awareness does not seem to vary with differential exposure to BBS-television at the two extremes.

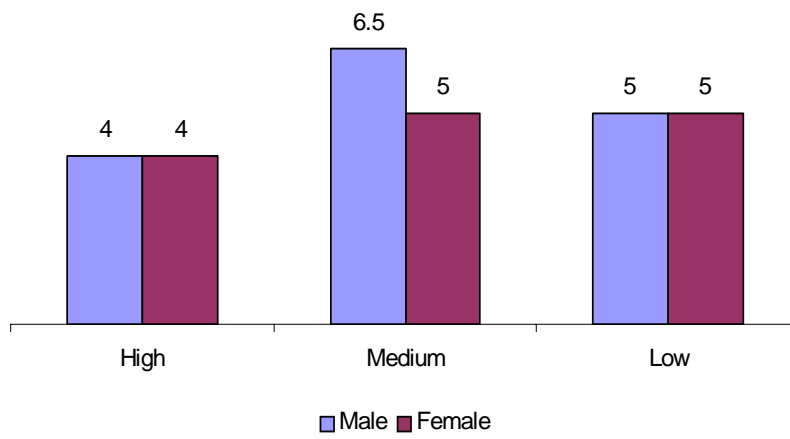
Table 15: Average score on environmental awareness index for differential exposure to each media according to gender

	High		Medium		Low	
	Male	Female	Male	Female	Male	Female
Kuensel	6	5	6.0	5.0	5	5.0
BBS-radio	4	4	6.5	5.0	5	5.0
BBS-TV	5	5	6.0	5.2	5	5.5

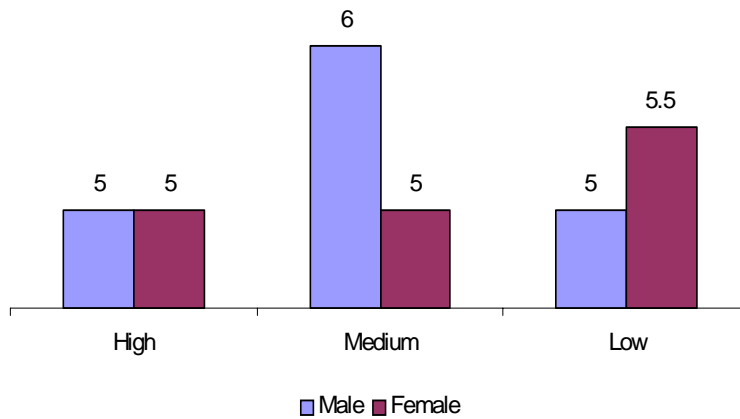
Graph 16: Average score on environmental index for differential exposure to the Kuensel



Graph 17: Average score on environment awareness index for differential exposure to BBS-radio



Graph 18: Average score on environmental awareness for differential exposure to BBS-TV



The average score on environmental awareness was further explored according to gender to investigate whether the environmental awareness score varies across differential

exposure to various media between the male and the female respondents.

It can be seen from the table above that the average score on the environmental awareness index for males with high exposure to *Kuensel* was higher than the average score for females at the same level of exposure. This was also true for those males who were moderately exposed to *Kuensel*. It might be that male respondents read articles concerning environment (if any) in *Kuensel* more often and remember them much more readily than females. It might be that the female respondents who read such articles consider them not so important to remember for later reference. The issue needs to be further explored.

It can be inferred that reading *Kuensel* for more than an hour a week appears to enhance the environmental awareness score of males more than females, while spending less than an hour per week on *Kuensel* does not bring any appreciable difference in the average score between the male and female respondents.

The average scores on environmental awareness of males and females belonging to marginally exposed groups to various media did not differ much. In fact, this is higher when compared to the average score of the respondents highly exposed to BBS-radio. This suggests that spending more than eight hours per week on listening to BBS-radio neither brings an appreciable increase in the average score of environmental awareness, nor any difference in the score among males and females. This does not seem to suggest that spending more time on BBS-radio proves to be counterproductive in terms of raising environmental awareness. It could be that respondents tend to listen to other programs when they have more time to spare to listen to BBS-radio. In terms of the groups that are moderately exposed to each of the media, the average score of males on environmental awareness is higher than that of females. This means that, generally, males who read *Kuensel* for one to two hours per week or listen to BBS-radio or view BBS-television for four to eight hours a week, have scored more on environmental awareness than females. This suggests that

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perhaps males who are moderately exposed to various media are able to focus on particular programs of relevance and enhance their understanding of the issue.

However, the average scores of both males and females who have low exposure to various media are not very low. This might indicate that the various media considered are not the only source that contributes to the respondents' environmental awareness. These media would have contributed to some extent, but it would be worthwhile to quantify how much each media contributes to enhancing individual awareness on environmental issues. This may be an area of further study by exploring the time and the content of the programs offered by various media on environmental themes, and the behavioural or attitudinal impact it has made on the respondents. This would not only indicate but also quantify the importance of media in environmental education.

Conclusion

The present study was primarily aimed to determine the influence of public communication in Bhutan such as *Kuensel*, radio, and television, on individuals' environmental awareness by taking into consideration the varying degrees of exposure to each of the above-mentioned forms of media. It was also expected to assess the potential role of each media in creating environmental awareness by making an attempt to delineate the most important functions served by each media and the influence of each media on individuals' way of making decisions. The study was also aimed to investigate the above issues according to gender.

As background information to the above investigations, the information on the respondents' attitude toward media was collected and analyzed for the whole sample and among the male and female respondents.

The following is a presentation of what the study says:

Attitude towards Mass Media

Attitude towards Kuensel

A majority of the respondents are expected to have access to *Kuensel*, radio, and television but a greater proportion of them read *Kuensel* rather than listen to radio or watch television.

A typical respondent is likely to read *Kuensel* either from the office or the reading room in the library. He/she is most likely to spend on average, a couple of hours per week reading *Kuensel*. He/she mostly reads *Kuensel* for information. In fact, a greater number of respondents look at *Kuensel*, and not other forms of media, as the primary source for information. Although, *Kuensel* has an influence on the majority of respondents, the typical respondent is usually affected only sometimes in his/her decision-making by the events reported in *Kuensel*.

An equal number of male and female reads *Kuensel* mostly from the office or the reading room. Information remains the primary reason for reading *Kuensel* by both genders. While a female is as equally likely to be influenced only sometimes as she is never by the events reported in *Kuensel*, the male is likely to be influenced only sometimes.

Attitude towards BBS-radio

Sharing a radio set either with his/her family or a friend, a typical respondent is likely to spend four hours per week listening to BBS-radio, mainly for information. He/she is as equally likely to be affected sometimes in decision-making as never by the events broadcasted on BBS-radio.

While the typical female is likely to share a radio set with her family or friends, the typical male is as likely to own a radio set as share one with his kin. The typical male is likely to spend more number of hours per week listening to BBS-radio than his female counterpart. They are likely to listen to radio for information and both are seldom affected by the events reported.

Attitude towards Television

A typical respondent probably shares a television set with his/her friends or family, and devotes six hours per week watching television. In fact, the typical respondent spends a much greater number of hours per week watching television than using other forms of media. Given the fact that the time spent on watching BBS-television is also included on the time spent on watching television in general, the typical respondent is more likely to spend more time watching national television than other channels available. Generally, television is regarded more for its entertainment value than the others; notwithstanding, typical respondents regard information as the most important reason for watching television. A typical person is as likely to be influenced sometimes in his decision as never by the events presented on television.

A typical male and a female are likely to share a television set with their friends or families and likely to spend almost equal number of hours per week watching television, which is comparatively higher given the average time spent per week on the other forms of media. A typical male is likely to spend more hours per week watching BBS-television than the female counterpart. Both use television mainly for information and are as likely to be influenced sometimes as never by the events reported on BBS-television.

The Influence of Media

The impact of media on respondents' decision-making following an event reported was investigated. Although the majority of respondents were influenced at different occasions, the influence of *Kuensel*, in particular, was found to be more than the impact of television and radio on the respondents' decision-making.

Furthermore, the influence of *Kuensel* seems to be more on males than females but this did not differ much by gender with BBS-radio and BBS-television.

The influence of various media on decision-making seems to vary positively with the time exposed to each media.

This suggests that the more time one spends reading *Kuensel*, listening to radio, and viewing television, the more one is likely to be influenced by the events reported on the decision one makes.

The data on differential exposure to television and the impact of each media on the individuals' decision-making was examined to find whether there is any association. The results suggest a positive correlation but to a low degree. Although the amount of time exposed to various media was not a good predictor of the impact of each media on individuals' decision-making, it nevertheless showed some association. In fact, the correlation of the amount of time spent on listening to radio and the influence of events reported on radio was relatively stronger followed by *Kuensel*.

It has been reported that radio allows individuals to collectively react almost simultaneously to an event being reported, while print media confers the power of non-involvement where the individual reader is detached for that moment from the rest and reacts slowly (Menon, 1981). However, there is a rapid advance in information technology and the creation of on-line forums for almost every print media to facilitate an interactive forum and provide even better opportunity for people with access to these facilities to involve and participate in discussion. The *Kuensel*-online is one such example where the readers interact and participate with much-needed passion and honesty. Such form of on-line discussion is revolutionizing the typical non-involvement and time-delayed role of print media into an active and fully participatory form of media.

Role of Media in Environmental Education

This is attempted to investigate the relation between the perception and expectation of individual on the role of media in environmental education. It is indicated that the majority of respondents believed that various forms of media have played a positive role on environmental awareness. In particular, *Kuensel* and BBS-television was regarded to be playing contributory role in enhancing environmental

awareness. More women seem to be supporting the above statement than men. Slightly higher degree of correlation obtained for females suggest that their level of environmental consciousness is due to *Kuensel* and BBS-radio.

However, the potential role that media could play in raising environmental awareness was not quite as high. But it was not too low as well since equal number of respondents expected that media would be able to play moderate to highly level of role in environment awareness. This means that media could play a promising role in enhancing environmental awareness if media content is extended to include environmental coverage. This is a very good indicator of the prospective role of media in conservation effort, which relies closely on public awareness and participation. Conversely, females do not sound to be as promising as before in regarding the prospective role of media in environmental education as positive. This decrease in expectation of the media's potential role in environmental efforts is difficult to explain and needs further exploration.

Level of Environmental Awareness

Most of the respondents are only moderately environmentally conscious. Although there are more women who are moderately environmentally conscious compared to men, there are far more men who are highly environmentally conscious than women. Generally, it can be inferred that men are more environmentally conscious than women.

One major finding is that the groups with varying degrees of exposure to *Kuensel*, BBS-radio and BBS-television differed with regard to their environmental awareness score, which indicate that the differential exposure to each media is likely to raise environmental awareness in different ways. The groups that are moderately exposed to each media are likely to have higher score on environmental awareness index. Thus, it can be inferred that moderate exposure to *Kuensel*, BBS-radio and BBS-television is likely to improve the environmental consciousness among the user of these media. Even low exposure group did not

score very low on environmental score indicating that various media considered for the current study are not the only source that contributes to the respondents' environmental awareness

Examination of this fact between genders reveals that, generally, males with moderate exposure to media scored higher on environmental awareness index than females.

Concluding Remarks

With most of the respondents aged between 16 to 25 and coming from diverse experiences and places all over Bhutan, the current sample is more representative of the younger generations: a very significant player in the future of the country. It is clear from the study that information is the major gratification for using various media considered in the study. This shows that most of the youth are information-oriented in using various media.

The study has provided evidence that the influence of media on decision-making is quite significant with most of the respondents affected at least sometimes by the events reported. There is also an indication that this influence is likely to increase with the time exposed to media.

A perceptible effect of differential exposure to media on individuals' environmental awareness is also visible. The study has provided evidence that moderate exposure to television is likely to enhance people's environmental attitude and outlook.

The study also indicated an optimistic expectation of the role that media could play in environmental education by extending coverage on environmental themes. Therefore, suggesting a tremendous potential for media to foster an affinity for environmentalism.

These findings from the study further suggest that the risks which the country took in opening itself to the influx of mass media could be turned into the opportunities for reinforcing the link between the environmental preservation and the cultural heritage, which underpins the guiding principles of environmental conservation in Bhutan.

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