

## **The Internet Usage among Students: A Uses and Gratifications Perspective**

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Uses and gratifications research helps in finding out how audience makes use of mass media to gratify their needs. Media research can help both the industry and the academia to map audience behaviour which is very much connected to various factors such as geography, culture, education and socio-economic circumstances. This research conducted among students reveals that students make use of the Internet primarily with an entertainment motive, and only secondarily for education and current affairs knowledge. The study also reveals that digital divide is widely prevalent and it is an important issue to be looked at especially in terms of gender, though the digital divide has been narrowing among students in terms of geography.

**Keywords:** Internet, uses and gratifications, digital divide, ritualised and instrumental needs

The Internet has redefined communication and brought about an exponential increase in human communication without the hindrance of time and space. Today, people everywhere are increasingly using the Internet resources to communicate with their friends and relations, transact business, fulfil entertainment needs, and get updates on events and issues.

The Internet, a network of computer networks, had its origin in the computer research carried out at a few Universities in the US in the 1960s under the aegis of Advanced Research Projects Agency (ARPA) which resulted in ARPANET, the precursor of today's Internet. In the history of the Internet, the National Science Foundation Network (NSFNET) set up in 1985 to promote advanced research and education networking in the United States soon emerged as the Internet backbone. In 1989, came the revolutionary invention of the World Wide Web (WWW) by Tim Berners-Lee, a British scientist at European Organisation for Nuclear Research, and WWW was put in the public domain in 1993. A host of complementary technologies such as the launch of user friendly and affordable laptops, tablets, iPads, smartphones, search engines such as Google, Wi-Fi technology to provide Internet access via wireless local area network, mobile apps, and the emergence of the Internet service providers have played a pivotal role in accelerating the popularity of the Internet across continents.

As of December 2015, a staggering 3.2 billion people were estimated to be using the Internet around the world (ICT facts and figures, 2015). Among all countries, China stood first with an estimated user base of a little over 721 million followed by India with a little

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over 462 million users and the US with 289 million users (Internet World Stats, 2016). Though the Internet user base is concentrated in urban regions, the usage in rural India is expected to increase substantially in the coming years.

As the Internet usage is projected to increase in India in the coming years, periodic studies among rural and urban users of the Internet from the uses and gratifications perspective need to be conducted to gain a clear picture as to who the users are and why they use the Internet. Such studies would be of value to both the media industry and the academic community. Against this backdrop, this study was conceived. Before outlining the study objectives, methods and results, it is essential to take an overview of the Uses and Gratifications (U&G) theory and review Internet U&G studies.

The Uses and Gratifications theory has served well in understanding why and how audience uses media and their content. Firmly grounded in the limited effects model of communication, the U&G theory is positivistic in its approach in understanding and explaining mass communication from an audience-centered perspective. As a theory, it seeks to explore the social and psychological origins of needs among media users (McQuail, 2009), and their motives that define their media usage and the effects generated by such usage (Papacharissi, 2009).

The U&G approach had its origin in Herta Herzog's pioneering study among daytime radio listeners (Herzog, 1944). From the 1950s onwards, inter-disciplinary research by communication researchers and psychologists produced abundant research on the ways human beings interact with the media. As has been explained by Katz, one of the early proponents of U&G theory, the U&G approach focuses on finding answers to the question "what do people do with the media?", as opposed to "what do the media do to people" (Katz 1959, p. 2). The theoretical foundation of U&G approach rests upon "(i) the social and psychological origins of (ii) needs, which generate (iii) expectations of (iv) the mass media or other sources, which lead to (v) differential patterns of media exposure (or engagement in other activities), resulting in (vi) need gratifications and (vii) other consequences, perhaps mostly unintended ones" (Katz, Blumler & Gurevitch, 1974, p. 20). Such a theoretical explanation stemmed from the fact that people make choices about what they consume, and their choices are guided by the uses they believe they can make of the media and the gratification they gain from media experiences (Arnett, Larson & Offer, 1995).

During the 1970s, the U&G research approach underwent refinement taking into account individual's basic needs and socio-psychological features which in conjunction with each other define the motives for media usage and gratifications. Motive is nothing but a certain desire or need that directs people towards a particular direction. In the case of mass media, motives make people use various media in a certain way. Different people will have different motives according to their particular socio-psychological context. Such contextual environment creates particular needs in individuals which eventually lead them to gratify those needs. Here, gratification can be termed as a source that results in satisfying, rewarding, giving pleasure or gratifying one's needs born out of socio-psychological environment. Rubin (1994) is of the opinion that while people take initiatives in selecting and using media to satisfy their needs, media on their part compete with other forms of communication for selection, attention and use to gratify people's needs and wants.

In developing a measure to assess motives that make people use media Greenberg (1974) made a notable contribution by constructing a Likert-type motives scale in 1974 while assessing British children's television viewing motives. To construct the scale, Greenberg asked students of a London school to write an essay on 'Why I Like to Watch Television.' From the essays, he identified 31 motives and constructed a scale.

Rubin, a prolific U&G researcher, fine-tuned Greenberg's scale in a series of studies aimed at measuring television motivation of children as well as of adults in the US. A first study in the series was based on the data he had collected for a study in 1978 from two Midwestern communities to identify television viewing motivations (Rubin, 1981). The respondents of the study indicated their levels of agreement with 30 motive statements across five response options, ranging from "exactly" to "not at all." The factor analysis procedure comprising of principal component analysis with oblique rotation yielded five gratifications: (i) Pass-time/habit, (ii) Information/learning, (iii) Entertainment, (iv) Companionship, and (v) Escape (Rubin, 1981). Since then Rubin's television motives scale has been used in examining the U&G of a variety of media and their content. In the U&G studies of the Internet too, Rubin's television motives scale has been used by several researchers (e.g. Perse & Dunn (1998); Kaye (1998); Ferguson and Perse (2000); Papacharissi and Rubin (2000); Althaus and Tewksbury (2000); Choi and Haque (2002); Ko, Cho and Roberts (2005); Tsao and Steffes-Hansen (2008); and Ayyad (2011)).

Besides identifying gratification typologies, researchers have grouped gratifications under distinct categories. Palmgreen and Rayburn (1979) distinguished two facets of gratifications, namely, gratifications-sought and gratifications-obtained. Rubin (1981, 1983), categorised television viewers as either "ritualized" or "instrumental" viewers. Ritualized viewers were habitual users who watched televisions for relaxation, entertainment, companionship, time-consumption. Instrumental viewers watched television to gather information on events, people, and places and use the gathered information in their social interactions.

## Literature Review

The tradition of the Internet U&G research originated in the US Universities, the early innovators and users of computer mediated communication (CMC) in the 1980s and more so in 1990s. For instance, Rafaeli's (1986) assessment of the uses and gratifications of Stanford University's electronic bulletin board revealed three primary gratifications: recreation, entertainment, and diversion. Similarly, in a 1995 study, Kaye found that the usage of WWW among college students in the US was prompted by six motivations: "entertainment, social interaction, passing the time, escape, information, and Web site preference" (Kaye 1998, p. 34). The study also found that about one fourth of the respondents of the study were spending less time using traditional media like television, VCRs, magazines, and newspapers ever since they began using the Web. Eighmey and McCord (1998) in a study of the uses of five websites among college students found that the websites' uses were similar to those reported in studies of traditional media such as television.

In the US, the first national survey of the public's use of the Internet was carried out in 1995 and was followed by three surveys in 1996, 1997 and 2000 (Katz, Rice & Aspden, 2001). While the 1995 study was based on a random telephone survey with a sample of 2500, the subsequent surveys however had a reduced sample size. An important deduction implicit in the comparison of 1995 and 2000 survey results was that the Internet had come to be accepted as a "positive innovation" (p. 414). The survey results revealed that social interaction through sending and receiving emails was a salient motive for using the Internet. Korgaonkar and Wolin's (1999) survey among US University students showed that web usage had significant correlation with the users' education and income; their motivations correlated well with the "time spent on the Web for both personal and business purposes, and the users' purchasing behaviour" (p. 66).

By the beginning of new millennium, the use of motivation statements on Likert scale was common among researchers involved in studying the U&G of the Internet. For instance, Ebersole (2000) used a 5-point Likert scale with 46 statements to assess U&G of the web among students in 10 Colorado public schools. An exploratory principle components analysis of the statements resulted in seven reasons for using the Internet: (i) research and learning, (ii) easy access to entertainment, (iii) communication and social interaction, (iv) something to do when bored, (v) access to material otherwise unavailable, (vi) product information and technical support, (vii) access games and sexually explicit sites, and (viii) consumer transactions.

Flanagin and Metzger (2001) investigated the Internet usage in relation to the traditional media by drawing a non-random sample of 684 students from two US universities. To identify the motives, they developed 21 needs statements skimmed from previous studies. The analysis revealed that in relation to newspapers, TV, books and magazines, it was "the Internet that was most highly used medium for getting information" (p 174). And the Internet was being used to meet 10 needs: information, learn, play, leisure, persuasion, social bonding, relationship maintenance, problem solving, status, and insight.

One of the most often cited U&G study is that of Papacharisis and Rubin (2000) which was based on a voluntary sample of 274 students of an introductory communication course in a mid-Western university. They constructed a Likert-type Internet motive scale consisting of 30 statements some of which were priori categories and some adapted from previous research. The factor analysis involving principal component analysis with Varimax rotation yielded five gratification factors: Interpersonal utility, pass time, information seeking, convenience, and entertainment.

Althaus and Tewksbury's (2000) study involving 520 undergraduate students found that passing time followed by entertainment were the two most prominent reasons for using the web. The authors concluded: "Our respondents find the Web useful for keeping up with current issues and events but tend to view it primarily as an entertainment medium and only secondarily as a news medium" (p. 33).

Tsao and Steffes-Hansen's (2008) study among 437 teenagers in the US showed that the teenagers were using the Internet for entertainment, to know about Internet technology (to check new websites, web tools, play games etc.), build social networks, overcome loneliness, and research. The researchers noted that "girls are more likely than boys to go online because they feel lonely and want to be distracted." (pp. 178-179). And boys were more interested in the net technology than girls.

In the first decade of the new millennium, U&G studies of the Internet began to be conducted in other parts of the world including India. For instance, a study conducted in Korea by Choi and Haque (2002), found that Koreans were using the Internet "to communicate with family and friends, entertain themselves, have sexually-oriented materials and compare prices and purchase products online" (p. 133).

Likewise, a survey conducted by Ko, Cho, and Roberts (2005) among college students in the United States and Korea, supported the findings of Papacharissi and Rubin (2000) who had found information, convenience, entertainment and social interaction as the major motivations for using the Internet. Similar were the results of a study conducted among students of University of Sharjah, UAE by Ayyad, (2011). This study also revealed that Sharjah students used the Internet mostly to entertain themselves, to get information related to their course work, and to communicate through e-mail. The study identified several advantages of the Internet over traditional media: "It is the best communication tool to access and get information; to download information and photos; ease to download audio-visual to get data through search engines; and to access other media" (p. 55).

In Spain's capital city Madrid too entertainment was found to be the primary gratification sought by high school students (Jimenez, et al. 2012). The study designed to gauge Internet use patterns among adolescents, found that older adolescents "tend to focus their use of Internet towards audio-visual entertainment, while younger adolescents focus, to a greater extent, on games." (p. 250). The study also noted that the girls were more inclined to use the Internet for information and to communicate with friends.

Ahrens (2013) investigated gender differences in the use of the Internet through qualitative interviews in Germany and Australia. The finding showed that men used the Internet more than women. While men used the Internet to relax and seek pleasure, women in general were goal-oriented. A study by Adegbija et al. (2013) showed that most students in Nigeria used the Internet to access Facebook, World Wide Web and search engines. Above all, most used it for messaging, a social interaction activity.

In India, as early as 2004, a survey by Mathur (2004) in rural Andhra Pradesh showed that on an average the internet was being used just once or twice a month for a short duration of less than half an hour. Most rural users were accessing information on topics such as current issues, financial matters, training and education, agriculture and health. Another Indian study (GuhaThakurta, 2008) showed that 70 per cent of users of the Internet were from cities and only 15 per cent were women. This study quite clearly indicated to the prevalence of digital divide in India, both at the gender as well the geographical level. Varshney et al. (2014) examined the demographic profile of the Internet users of India. They found that the Internet usage varied with age, occupation, and urban and rural location of the respondents.

A more elaborate study among college students in Kerala by Prasad (2012) sought to determine students' usage patterns and gratifications of the Internet and other media. The study revealed that a little over 56 per cent of the students surveyed were spending half an hour to one hour whenever they logged on to the Internet. And the Internet usage was "significantly higher among male, school going, lower aged, urban and high income group students" (p. 108). This study too indicated the prevalence of digital divide in Indian society.

Through factor analysis Prasad (2012) identified six gratifications. The most salient gratification was 'time pass and information', followed by 'social interaction', 'entertainment', 'education', 'IT application' and 'financial benefit', in that order. From such an ordering, it is amply evident that students were using the Internet primarily for ritualistic gratifications such as passing time and entertainment rather than for instrumental gratification of educational purposes. Such a trend is seen in the West as well. Prasad's study also showed gender differences in the nature of gratifications sought. While the tendency of using the Internet to pass time and for entertainment was salient among female students, the incidence of using the Internet for education was higher among male students.

In summary, the results of the past studies conducted both in the US and other countries are to an extent similar, though not identical in the number and nature of gratifications identified. The studies show that the usage of the Internet among students varies in relation to their age, gender, and urban and rural location of the users. Besides these independent variables, the usage pattern could be dependent upon students' subjects of study - arts, science and commerce. As this parameter remains unexplored, it would be worth examining whether the usage of the Internet would be similar among students irrespective of their subjects of study.

In respect of the gratifications, past studies point out that students use the Internet primarily to gratify their entertainment needs. The other motivations of lesser importance

are passing time, habit, social interaction, education, information and surveillance. The Internet usage pattern and the gratifications users derive from the Internet cannot be expected to remain constant across time. Therefore, there is a need to conduct studies periodically to gauge the uses and gratifications of the Internet among students of different geographical locations. Such studies in India are sparse. Accordingly, the present study was conducted in Karnataka, one of the six Indian states with the highest number of student enrolment in higher education. (All India survey, 2013).

## Objectives

The specific objectives of the study are:

- (i) To assess the correlation between the 'frequency' and the 'time spent' dimensions of the Internet usage,
- (ii) To assess the Internet usage among students in terms of their gender, place of study and subjects of study, and
- (iii) To determine the gratifications students obtain from the Internet.

## Measures

The Internet usage is not one-dimensional and therefore researchers have tended to measure it in terms of the two dimensions, namely, the frequency of usage and the time spent using it in a week or in a day. While some researchers have measured and described the Internet usage in terms of both the dimensions (e.g. Johnson & Kaye, 1998; Ferguson & Perse, 2000; and Bubas & Zeljko, 2003; Gemmill & Peterson, 2006; Eduljee & Kumar, 2015), some others have chosen to focus only on the time spent dimension (e.g. Kaye, 1998, 2004; Li a, N. and Kirkup G, 2007; Jones et al., 2009; Cauwenberge, 2010; Korgaonkar & Silverblatt, 2011).

Such a practice among researchers ostensibly rests on the presumption that these two dimensions are interrelated as those who use the Internet more frequently could be spending more time using it. Such a presumption calls for empirical evidence. Hence the need to correlate the two parameters so as to verify their reciprocal nature. To realise this objective, the frequency dimension of the Internet use was defined and measured as the number of days the Internet is used in a week with eight responses choices: 7 days a week, 6 days a week, 5 days a week, 4 days a week, 3 days a week, 2 days a week, once a week, and less than once a week. These eight choices beginning from 7 days a week to less than once a week were to be scored from 8 to 1. Likewise, the time dimension was defined as the time spent using the Internet on a normal day by the users and it was measured through four answer choices: less than 30 minutes, 30 minutes to one hour, 1 hour to 2 hours, and more than 2 hours. These four choices were to be given score of 1 to 4 respectively.

## Gratification Scale

The use of motive statements has been a standard practice among researchers in assessing the gratifications users seek and obtain from mass media. In the Internet U&G studies, researchers have adapted the statements which Rubin (1981) had used on a 5-point Likert scale to determine television viewing motivations. Following such a practice, a scale comprising of 16 statements representing eight motives which had figured prominently in past studies was developed for this study to identify students' Internet gratifications. The set of eight motives included: entertainment, pass time, habit, education, financial benefits, social interaction, escape, and surveillance/information. Each motive had two statements.

Thus, the 16 statements were presented in the questionnaire without any logical order. And the respondents were to indicate their level of agreement with each statement from the five response choices ranging from 'strongly agree' to 'strongly disagree' which during analysis were to be coded with scores ranging from 5 to 1 respectively.

Besides these measurement tools, the questionnaire designed for the study had questions on students' socio demographic variables including the 'place of study', 'the level of study' and the 'subjects of study'. The 'place of study' question was aimed to identify whether the students were studying in the urban or rural colleges. The 'course of study' question tapped information on whether the students were pursuing undergraduate or post-graduate courses. Similarly, the 'subjects of study' question was meant to identify students' subjects of study, namely, Arts, Science or Commerce. The questionnaire was tested in a pilot study before administering it to the students sampled for the survey.

### The Survey

The data for the study was collected through a survey among college students pursuing undergraduate degree and postgraduate courses leading to bachelor's degree and a master's degree respectively. As one of the aims of the study was to assess the difference, if any, in the Internet usage among urban and rural students, the sample was drawn from colleges located in urban and rural regions through a multi-step probability and non-probability procedure. In the first step, the Bangalore metropolitan area of Karnataka State was purposively chosen to represent the urban student population, while the district of Kolar, which is contiguous with Bangalore district, was taken to represent the rural segment of the student population. In the second step, a sample of 16 colleges from the 85 UGC-recognised colleges functioning in Bangalore metropolitan area and 8 colleges from the 13 UGC-recognised colleges functioning in rural district of Kolar, as on December 2014, were randomly chosen to draw the sample of students. In view of the fact that a large sample will have a relatively low sampling error, it was decided to draw a sample of about 500 students each from Bangalore and Kolar colleges so as to have a total sample of about 1000 for the study. (Cf. Gorsuch, 1983; Comrey & Lee, 1992).

In the third step, taking into account the varying number of classes and the strength of students in each class, a differential quota was assigned to Bangalore and Kolar colleges. Accordingly, a quota of 32 students was assigned to each of the 16 colleges of Bangalore city to yield a sample of 512. The strength of the colleges in Kolar being only 13, a higher quota of 60 students for six colleges and a quota of 80 for two colleges was assigned to yield a rural student sample of 520. Thus, the total sample planned to be drawn for the study was 1032.

In the final step, the researcher visited the selected colleges during January to February 2015, identified the classes from diverse subjects of study, and administered questionnaire to groups of students who were willing to participate in the survey. Such an elaborate process yielded 1032 filled questionnaires. With the elimination of 65 questionnaires which were incomplete or where the respondents had not responded as per the instructions, 967 was the sample size for the study.

### Analysis and Findings

A blend of probability and non-probability sampling method had not adversely affected the representative nature of the sample in respect of the key independent variables. As

shown in Table 1, the representation of male and female students in the sample was nearly equal: 47.2 per cent male and 52.2 per cent female.

As regards the place of study variable too, the representation of students studying in colleges in urban and rural areas was nearly equal: 50.7 per cent of the sample students were from urban area of Bangalore Metropolitan Corporation and the remaining 49.3 per cent were from rural district of Kolar. Drawing nearly equal, if not equal, number of students from the Arts, Science and Commerce streams proved difficult as the strength of Commerce students in a few of the sampled colleges was low. Even repeated visits to the colleges to contact the entire group of Commerce students was not of help.

Table 1. Sample description

	Variable	N	Percentage (%)
Gender	Male	462	47.8
	Female	505	52.2
Total		967	100.0
Place of Study			
	Urban	490	50.7
	Rural	477	49.3
Total		967	100.0
Course of Study			
	PG	343	35.5
	UG	624	64.5
Total		967	100.0
Subject of Study		Arts403	41.7
	Science	349	36.1
	Commerce	215	22.2
Total		967	100.0

As a result, the representation of Commerce students in the sample was low (22.2 per cent) as against a higher representation of and Arts (47.1 per cent) and Science students (36.1 per cent).

### Frequency of Internet Use and Time Spent

Examining the correlation between the two interrelated usage dimensions of the frequency of the Internet use and the time spent on the Internet on a normal day was the first objective of the study. To realise this objective, as explained earlier, the frequency of the Internet use in a week was assessed through eight interval level response choices. These eight choices were scored from 8 to 1 respectively.

The analysis revealed that the single largest majority of students (39.3 per cent) was the daily users of the Internet. The second largest segment of students (16.2 per cent) used the Internet less than once a week. Those who used the Internet once a week formed the third highest proportion (9 per cent) followed by 4 days a week (8.2 per cent), 3 days a week (7.7 per cent), 5 days a week (7.7 per cent), 2 days a week (7.4 per cent), and 6 days a week (4.6 per cent). The mean frequency score of the sample was 5.20 days with a standard deviation of 2.75.

In respect of the rime spent dimension, the analysis showed that over half of the students reported using the Internet for more than one hour. In that, as many as 28.3 per



cent of students used the Internet for more than 2 hours, while 24.8 per cent used it between 1 and 2 hours respectively. Only 19.2 per cent used it for 30 minutes to one hour. An equal per cent of students were using the Internet for 30 minutes to 1 hour duration. The shortest duration usage of less than 30 minutes was prevalent among 27.7 per cent of the sample. The mean of the time spent by sample was 2.46 hours with a standard deviation of 1.17.

Pearson correlation between the frequency of the Internet use in a week, and the time spent using it on a normal day showed a positive correlation ( $r = .628$ ,  $N = 967$ ,  $P < .01$ ) indicating the reciprocal nature of the two variables. Therefore, it can be said that those who access the Internet more frequently also spent more time using it. Hence, either of the two dimensions could be used in assessing Internet usage. Of the two, the most appropriate is the frequency dimension as its measure had a higher spread with 8 intervals as against just 4 in the time spent dimension. Thus, the frequency dimension has been used in realising the second objective of the study.

### Gender, Place and Subject of Study and the Frequency of Internet Use

The frequency of the Internet usage was not similar among male and female students wherein male had a higher frequency score ( $M = 5.68$ ,  $SD = 2.58$ ) than female ( $M = 4.76$ ,  $SD = 2.82$ ). To ascertain the significance of the difference between the gender groups, t-test was conducted fixing the significance threshold at .05. As reported in Table 2, the t-test revealed that the differences between the means of the two groups were statistically significant ( $t = 5.27$ ,  $p < .001$ ). Thus, it can be inferred that male students used the Internet more regularly than female students.

Table 2. Internet use frequency by gender

Group statistics				t-test for equality of means		
				t	df	p
Gender	N	Mean	SD	5.27	965	<.001
Male	462	5.68	2.58			
Female	505	4.76	2.82			
Total	967	5.20	2.75			

### Frequency of the Internet Use by Place of Study

With regard to the place of study, urban students had a higher frequency mean of 6.33 ( $SD = 2.43$ ) as against a low mean of 4.04 ( $SD = 2.57$ ) among rural students (Table 3).

Table 3. Internet use frequency by place of study

Group Statistics				t-test for equality of means		
				t	df	p
Gender	N	Mean	SD	14.24	965	<.001
Urban	490	6.33	2.43			
Rural	477	4.04	2.57			
Total	967	5.20	2.75			

Expectedly, the t-test at a significance criterion of .05 revealed statistically significant ( $t = 14.24$ ,  $p < .001$ ) difference between the two groups. From such a showing, it can be inferred that urban students used the Internet more frequently than rural students.

### Frequency of the Internet Use by Subjects of Study

In respect of the subjects of study, the mean frequency scores of Arts, Science and Commerce students showed no marked differences, though Science students had a slight higher regularity score

Table 4. Internet use frequency by subjects of study

Group Statistics				One-Way ANNOVA					
Subjects of Study	N	Mean	SD	Source	df	SS	MS	F	P
Arts	403	5.06	2.82	Between groups	2	14.16	7.09	.938	.392
Science	349	5.34	2.77	Within groups	964	727.38	7.55		
Commerce	215	5.24	2.57	Total	966	728.71			
Total	967	5.20	2.75						

than Commerce ( $M=5.24$ ,  $SD=2.57$ ) and Arts ( $M=5.06$ ,  $SD=2.817$ ) students (Table 4). A one-way analysis of variance showed that the differences were not statistically significant, as  $df(2, 964) F=.938$ ,  $p=.392$  was significant at .392, and not at .05. Thus, it can be said that the students' subject of study had no bearing on the frequency of Internet use.

In sum, the variables of gender and place of study mattered in the frequency of the Internet use. In that, male and urban students were using the Internet more frequently than female and rural students. And the students' subject of study had no bearing on the frequency of the Internet usage.

### Internet Gratifications

Assessing students' Internet gratifications was the third objective of the study. To realise this objective, eight motives namely, entertainment, pass time, habit, education, financial benefits, social interaction, escape, and surveillance/information were garnered from past studies. Each motive was represented by two positive statements. Thus, 16 motives statements were presented in the questionnaire without any logical order and the respondents indicated their level of agreement with each statement on a 5-point Likert scale (5=strongly agree, 1=strongly disagree). The responses were factor analysed using principal component analysis with Varimax (orthogonal) rotation.

The analysis yielded three factors with an eigenvalue of greater than 1 accounting for a total variance of 54.04 per cent. In that, the first factor accounted for 34.64 per cent of the variance, and the share of the second and the third factor was 12.64 per cent and 6.76 per cent respectively. In Table 5, the factor loadings of the items under the three factors are highlighted. Also shown in the Table are the Mean (M) and Standard Deviation (SD) of each motive.

The first factor named 'entertainment and pass time' gratification comprised of 10 interrelated motives of 'pass time', 'forget problems', 'habit', 'daily routine', 'escape from day-today pressure', 'entertainment', 'nothing better to do', 'for fun', 'to overcome loneliness', and 'interaction with others'. Their mean ranged from 3.71 to 3.03.

The motive items' Cronbach's Alpha of .867 is indicative of a relatively high internal consistency. Thus, 'entertainment and pass time' gratification can be reckoned as the

primary and dominant Internet gratification. That 10 motives had converged in the first factor suggested that the students tended to perceive and use the Internet to gratify a variety of entertainment and pass time needs which inherently are of ritualistic orientation.

Table 5. Rotated factor matrix of Internet motives

Factor Motives	Factor 1: Entertainment & Pass Time Gratification	Factor 2: Education, Current Affairs & Knowledge Gratification	Factor 3: Procure Goods & Services Gratification
<b>Factor 1 Motives</b>			
Pass time (M=3.33; SD=1.141)	.727	.115	-.067
Forget problems (M = 3.06; SD=1.154)	.681	.031	.271
Habit (M= 3.12; SD =1.192)	.671	.120	.119
Daily routine (M=3.12; SD=1.196)	.670	.180	.137
Escape from day to-day pressure (M= 3.03; SD=1.127)	.668	.107	.163
Entertainment (M=3.44; SD=1.097)	.659	.155	-.012
Nothing better to do (M3.18; SD=1.199)	.655	.020	.113
Fun (M=3.51; SD=1.085)	.646	.192	-.030
Overcome loneliness (M=3.04; SD=1.180)	.626	.051	.311
Interaction with others (M= 3.71; SD=1.105)	.500	.348	.137
<b>Factor 2 Motives education (M=4.14;SD=.968)</b>			
Update on world events (M=3.97; SD=.981)	.131	.759	.040
Current affairs (M=3.82; SD=1.042)	.229	.737	.074
Knowledge (M=4.06; SD=.972)	.113	.699	.261
<b>Factor 3 Motives procure goods and services (M=3.52;SD=1.173)</b>			
Buy/sell products/services for economic benefits (M=3.58; SD=1.159)	.180	.164	.820
Eigenvalue	5.542	2.022	1.081
Common variance explained	34.638	12.638	6.757

The second factor labelled as 'education, current affairs and knowledge' gratification had four interrelated motives of 'education', 'update on world events', 'current affairs,' and 'knowledge'. Their mean scores were quite high at 4.14, 3.97, 3.82, and 4.06 respectively. The four motives had Cronbach's Alpha of .777. This motive, though only second in importance, is of instrumental nature as students tended to use the Internet's rich resources to know about current happenings, acquire knowledge and education which certainly are of value in their academic pursuits.

The third and the last factor named as 'procure goods and services' gratification was made up of two motives of 'procure goods and services', and 'buy/sell products/ services for economic benefits.' The mean scores of the two motives were 3.52 and 3.58 respectively with a Cronbach's alpha of .711. The results indicate that some students do use the Internet to procure goods and services that bring them financial benefits.

## Discussion and Conclusion

The study examined the assumption that those who use the Internet more frequently could be spending more time using it. The assumption stems from the fact that some researchers have assessed the usage of the Internet in terms of one of the two dimensions, namely, the frequency of usage and the time spent using it. The tenability of the assumption needed to be ascertained by correlating the two dimensions measured at the interval level.

And Pearson correlation showed a significant relationship between the two dimensions. Thus, it behoves that either of the two dimensions could be used in assessing the usage of the Internet. Logically, the appropriate one is the dimension of frequency of usage in a week which as measured in this study had a spread of 8 intervals. Hence, the frequency dimension can be used in assessing the Internet usage patterns among the users as has been done in this study.

The frequency of the Internet use among students differed in respect of their gender and urban-rural belonging, though not in their subjects of study. That male students used the Internet more frequently than female students points to the existence of gender gap among students. That a similar usage pattern detected in a study done in Kerala (Prasad, 2012) points out that the gender gap exists across diverse geographical setting and is yet to narrow down. As has been noted by the Broadband Commission for Digital Development ("Broadband Commission", 2013), the digital gap perhaps is a reflection of gender inequalities especially in developing societies. One such inequality is ingrained in the restrictions on and inhibition of female students visiting neighbourhood cybercafés to use the Internet.

The digital gap was in evidence between urban and rural students with urban students using the Internet more frequently than their rural cousins. Such a disparity could be attributed to the low penetration of the Internet in rural India. Also, lack of continuous power supply in rural regions hinders students to make the best use of the digital revolution of sorts that is sweeping urban India. The gender and urban-rural gaps in the use of the Internet both in the urban and rural areas are likely to get bridged to an extent with the increasing popularity of smartphones. In particular, females would stand to benefit most as smartphones will enable them to use the Internet with ease from the privacy of their homes.

### Uses and Gratifications Typologies

Factor analysis of students' motives for using the Internet revealed three underlying factors which are named as 'entertainment and pass time' gratification; 'education, current affairs and knowledge' gratification; and 'procure goods and services' gratification. The entertainment and pass time gratification which had the prime salience was made up of 10 interrelated motives such as entrainment fun, pass time, habit, daily routine, nothing better to do, social interaction and the like. The present study's finding that students primarily use the Internet for entertainment and pass time related gratifications confirms the findings of scores of studies conducted since the beginning of the present millennium (Papacharissi & Rubin, 2000; Althaus & Tewksbury, 2000; Choi & Haque, 2002; Ko, Cho & Roberts, 2005; Tsao & Steffes-Hansen, 2008; Ayyad, 2011; Jimenez, et al., 2012; and Prasad, 2012). The Internet, undoubtedly, contains a huge amount of audio-visual resources consisting of websites for video streaming, downloading movies for free, and online games, which students use for entertainment and respite perhaps from pedagogic stresses.

As explained by Rubin (1984) all motives that are oriented towards entertainment and pass time are ritualistic in nature. The coming together of entertainment and pass-time related motives as a prime factor in this study, corroborates past research which had detected ritualistic use of the Internet to be more salient than the instrumental use (Althaus & Tewksbury, 2000; Tsao & Steffes-Hansen, 2008; Jimenez et al., 2012; Prasad, 2012).

Though the ritualistic use of the Internet stood out as of prime importance, the second and third factors named as 'education, current affairs and knowledge' gratification, and 'procure goods and services' gratification respectively are instrumental gratifications. The four motives that had coalesced into the second factor were education, update on world events, current affairs and knowledge suggests that students do use the Internet resources for knowledge and education purposes. A similar study done in Kerala (Prasad, 2012) had found education as the fourth gratification factor preceded by three ritualistic gratifications of time pass/habit, social interaction and entertainment.

Another interesting finding of the present study lies in the third and the last factor of 'procure goods and services' gratification which in Prasad's study (2012) had emerged as the last among the six gratifications. This finding suggests that online marketing in India which had a humble beginning in the early years of the Millennium has caught the attention of students and some of them do shop online via the Internet.

In conclusion, it is suggested that the correlation between the two Internet usage measures, namely, the frequency of usage in a week and the time spent using it on a normal day, be reaffirmed in future studies. In the event of detecting a positive correlation, researchers can measure and describe the Internet usage through the dimension of frequency of Internet usage in a week as has been done in this study. In respect of gratifications, the past studies and the findings of the present study indicate that the Internet which is reckoned as a powerful medium is being used by the students more for recreation and entertainment purposes, than anything else. Though this could be a pointer as to how students would be using the Internet in the years to come, it will be worthwhile to conduct periodic studies to fathom the changes in the uses and gratifications of the Internet among students belonging to different socio economic backgrounds. Certainly, a national survey among students drawn from different regions of India will be of value in getting a holistic picture of students' usage of the Internet.

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